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# QIAsymphony® SP/AS Consolidated Operating Guide

## QIAsymphony® SP/AS 操作指南

For use with software versions 4.0 and 4.1

适用软件版本：4.0 和 4.1



Version 1

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# 1 Introduction

## 简介

Thank you for choosing QIASymphony SP/AS instruments. We are confident that they will become an integral part of your laboratory. 感谢您选购 QIASymphony SP/AS 仪器。我们相信这款产品一定会成为您实验室不可分割的一部分。

This consolidated operating guide gives you basic information about operating the QIASymphony SP and AS instruments.

本版操作说明旨在传达有关操作 QIASymphony SP 和 AS 仪器的基础信息。

Before using the instruments, it is essential to read this consolidated operating guide carefully. The instructions and safety information in the consolidated operating guide must be followed to ensure safe operation of the instruments and to maintain the instruments in a safe condition.

在使用这两款仪器前，请务必仔细阅读本操作说明。本操作说明中所含的说明和安全信息可确保这两款仪器能够安全运行，同时有助于确保仪器维持安全工况。

## 1.1 General information

### 一般信息

#### 1.1.1 Technical assistance

##### 技术支持

At QIAGEN, we pride ourselves on the quality and availability of our technical support. Our Technical Services Departments are staffed by experienced scientists with extensive practical and theoretical expertise in molecular biology and the use of QIAGEN® products. If you have any questions or experience any difficulties regarding the QIASymphony SP/AS instruments or QIAGEN products in general, do not hesitate to contact us. 在 QIAGEN，我们为本公司技术支持的质量和可用性而感到自豪。我们的技术服务部门由在分子生物学和 QIAGEN 产品使用方面具有广泛实践和理论经验的科学家组成。如果您对 QIASymphony SP/AS 或 QIAGEN 产品有任何的疑问或在操作上有任何困难时，请及时联系我们。

QIAGEN customers are a major source of information regarding advanced or specialized uses of our products. This information is helpful to other scientists as well as to the researchers at

QIAGEN. We therefore encourage you to contact us if you have any suggestions about product performance or new applications and techniques.

QIAGEN 的顾客是有关我们产品高级或专业化使用的主要信息来源。这些信息对其他科学家们以及 QIAGEN 的研究人员都是很有帮助。因此，如果您对产品的性能或其创新性应用和技术有任何建议，我们希望您与我们联系。

For technical assistance, contact QIAGEN Technical Services.

如需技术支持，请联系 QIAGEN 技术服务部门。

For up-to-date information about QIASymphony SP/AS instruments, visit [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony).

如需了解有关 QIASymphony SP/AS 仪器的最新信息，请访问 [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony)。

#### 1.1.2 Policy statement

##### 政策声明

It is the policy of QIAGEN to improve products as new techniques and components become available. QIAGEN reserves the right to change the specifications of products at any time. 随着新技术与新部件的出现而改善产品是 QIAGEN 公司的政策。QIAGEN 公司保留在任何时间调整产品规格的权利。

#### 1.1.3 Version management

##### 版本管理

This document is the *QIASymphony SP/AS Consolidated Operating Guide*, version 1, revision 2 (for use with software versions 4.0 and 4.1). 本文档是 *QIASymphony SP/AS 整合操作指南* 版本 1 修订版 2 (适用于 4.0 和 4.1 版软件)。

## 1.2 Intended use of QIASymphony SP/AS

### QIASymphony SP/AS 预期用途

**Note:** The QIASymphony SP and AS instruments are intended for use by professional users, such as technicians and physicians trained in molecular biological techniques and the operation of QIASymphony SP and AS instruments.

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注意：QIASymphony SP 和 AS 仪器设计由接受过分子生物学技术和 QIASymphony SP 和 AS 仪器操作培训的专业人员（如技术员和医生）使用。

### 1.2.1 QIASymphony SP

The QIASymphony SP instrument is designed to perform automated purification of nucleic acids. QIASymphony SP 仪器设计用于核酸的自动纯化。

It is intended to be used only in combination with QIASymphony Kits indicated for use with the QIASymphony SP for the applications described in the kit handbooks. 本产品仅拟与适用于 QIASymphony SP 的试剂盒结合使用，试剂盒手册对相关应用进行了描述。

### 1.2.2 QIASymphony AS

The QIASymphony AS instrument is designed to perform automated assay setup. QIASymphony AS 设计用于检测自动设置。

If used in combination with QIAGEN kits indicated for use with the QIASymphony AS instrument, it is intended for the applications described in the respective QIAGEN kit handbooks. If the QIASymphony AS instrument is used with kits other than QIAGEN kits, it is the user's responsibility to validate the performance of such product combinations for any particular application.

如果拟与适用于 QIASymphony AS 仪器的 QIAGEN 试剂盒结合使用，其预期用于各 QIAGEN 试剂盒手册中所描述的应用。如果 QIASymphony AS 仪器使用非 QIAGEN 试剂盒，则用户有责任验证这种联用时特定应用的性能。

### 1.3 Requirements for QIASymphony SP/AS users 对 QIASymphony SP/AS 使用人员的要求

The following table covers the general level of competence and training necessary for transportation, installation, use, maintenance, and servicing of QIASymphony SP/AS instruments.

下表涵盖了 QIASymphony SP/AS 仪器的运输、安装、使用、维护及维修所需的一般能力和培训水平要求。

Type of task) 任务类型	Personnel 人员	Training and experience 培训和经验
Delivery 交货	No special requirements 无特殊要求。	No special requirements 无特殊要求
Installation 安装	QIAGEN Field Service Specialists only 仅 QIAGEN 公司现场维修专员	Appropriately trained and experienced personnel familiar with use of computers and automation in general 经过适当培训，大致了解计算机和自动化应用的有经验人员
Routine use (running protocols) 常规使用（运行程序）	Laboratory technicians or equivalent 实验室技术人员或同等资质者	Professional users, such as technicians and physicians, trained in molecular biology techniques 专业使用人员，如经过分子生物学技术培训的技术员和医生
Routine maintenance 常规维护	Laboratory technicians or equivalent 实验室技术人员或同等资质者	Professional users, such as technicians and physicians, trained in molecular biology techniques 专业使用人员，如经过分子生物学技术培训的技术员和医生
Servicing and annual preventive maintenance 维修和年度预防性维护	QIAGEN Field Service Specialists only 仅 QIAGEN 公司现场维修专员	Regularly trained, certified, and authorized by QIAGEN 由 QIAGEN 负责常规培训、认证和授权

### 1.3.1 Training for QIASymphony SP/AS users QIASymphony SP/AS 使用人员培训

Customers are trained by a QIAGEN representative upon installation of the QIASymphony SP/AS instrument(s). The training takes 1–3 days, depending on the subject and the knowledge level of the customer.

在 QIASymphony SP/AS 安装完成之后，客户即开始接受 QIAGEN 的培训。此项培训为期 1-3 天，具体视相关主题和客户的知识水平而定。

Basic training covers general operation of the system, user management, configuration, QIASymphony Management Console (QMC) software, regular maintenance, and basic troubleshooting. Application-specific topics will be addressed in an advanced training. 基本的培训内容涵盖了系统的一般操作、使用人员管理、配置、QIASymphony 管理控制台(QMC) 软件、常规维护和基本的故障排除。特定应用相关的内容则会在进阶培训时处理。

QIAGEN can also provide retraining, for example, after software updates, or for new laboratory personnel. Please contact QIAGEN Technical Services to get more information about retraining. QIAGEN 还可针对软件更新、实验室新招录人员等情况提供再培训。有关再培训的更多信息，请联系 QIAGEN 技术服务部门，

## 1.4 QIASymphony Cabinet SP/AS QIASymphony 柜式 SP/AS

The QIASymphony Cabinet SP/AS is an optional accessory for QIASymphony SP/AS instruments. QIASymphony Cabinets are specially designed for positioning the QIASymphony SP/AS instruments in your laboratory. For more information, visit [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony) or contact QIAGEN Technical Services. QIASymphony 柜式 SP/AS 是 QIASymphony SP/AS 的可选配件。QIASymphony 柜式 SP/AS 为特别设计用于定位您实验室中的 QIASymphony SP/AS 仪器。更多信息，请访问 [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony) 或联系 QIAGEN 技术服务部门。

## 1.5 User manual references 用户手册参考

The following user manuals are referred to in this consolidated operating guide:  
本操作说明参考了以下用户手册：

- ☞ *QIASymphony SP/AS User Manual — General Description*
- ☞ *QIASymphony SP/AS User Manual — Operating the QIASymphony SP*



- 🔗 *QIASymphony SP/AS User Manual — Operating the QIASymphony AS*
- 🔗 *QIASymphony Management Console User Manual*
- 🔗 *QIASymphony Cabinet SP/AS User Guide*
- 🔗 “*QIASymphony SP/AS 用户手册 - 概述*”
- 🔗 *QIASymphony SP/AS 用户手册 - QIASymphony SP 操作*
- 🔗 *QIASymphony SP/AS 用户手册 - QIASymphony AS 操作*
- 🔗 *QIASymphony 管理控制台用户手册*
- 🔗 *QIASymphony 柜式 SP/AS 用户指南*

## 1.6 Glossary 术语

For a glossary of terms used in this consolidated operating guide, refer to Section 11 of the *QIASymphony SP/AS User Manual — General Description*. 有关本操作说明之中使用的术语，请参阅“*QIASymphony SP/AS 用户手册 - 概述*”第 11 节。

## 1.7 QIASymphony SP/AS accessories QIASymphony SP/AS 附件

For information about QIASymphony SP/AS accessories, refer to Appendix C of the *QIASymphony SP/AS User Manual — General Description*.

有关 QIASymphony SP/AS 附件的信息，请参阅“*QIASymphony SP/AS 用户手册 - 概述*”的附录 C。

## 2 Safety Information 安全性信息

This consolidated operating guide contains information about warnings and cautions that must be followed by the user to ensure safe operation of the QIASymphony SP/AS instruments and to maintain the instruments in a safe condition.

本操作说明含有使用人员必须遵守的警示和注意信息，是确保 QIASymphony SP/AS 仪器操作安全、维持仪器良好工况的基本前提。


Possible hazards that could harm the user or result in damage to the instrument are clearly stated at the appropriate places throughout this consolidated operating guide.


可能造成使用人员人身伤害或者导致仪器损坏的危险，均在本操作手册之中适当的位置清晰地说明。

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

如果未按照制造商规定的方式使用本设备，则设备提供的防护功能可能会受损。

The following safety conventions are used throughout this consolidated operating guide.  
以下安全规定适用于整部操作说明。

<p><b>WARNING</b> 警告</p> 	<p>The term <b>WARNING</b> is used to inform you about situations that could result in <b>personal injury</b> to other persons.</p> <p>术语<b>警告</b>用于告知您可导致他人<b>人身伤害</b>的情况。</p> <p>Details about these circumstances are given in a box like this one. 有关这些情况的细节在与此相似的方框中给出。</p>
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<p><b>CAUTION</b> 注意</p> 	<p>The term <b>CAUTION</b> is used to inform you about situations that could result in <b>damage to an instrument</b> or other equipment.</p> <p>Details about these circumstances are given in a box like this one. 术语<b>注意</b>用于告知您有关可致<b>仪器损坏</b>或其他设备损坏的情况。</p> <p>有关这些情况的细节在与此相似的方框中给出。</p>
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The advice given in this manual is intended to supplement, not supersede, the normal safety requirements prevailing in the user's country.

本手册中建议旨在补充而非替代用户所在国家中普遍的一般安全性要求。

## 2.1 Proper use 正确使用

### Important


#### 重要


The QIASymphony SP/AS must only be operated by qualified personnel who have been appropriately trained.

QIASymphony SP/AS 必须仅由经过适当培训的合格人员操作。


Servicing of the QIASymphony SP/AS must only be performed by QIAGEN Field Service Specialists.

QIASymphony SP/AS 的维修必须仅由 QIAGEN 的现场维修专员完成。

<p><b>WARNING/ CAUTION</b></p> <p><b>警告/注意</b></p> 	<p><b>Risk of personal injury and material damage</b> <b>人身伤害与材料损坏风险</b></p> <p>Improper use of the QIASymphony SP/AS may cause personal injuries or damage to the instrument. QIASymphony SP/AS 使用不当可导致人身伤害或仪器损坏。</p>
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<p><b>CAUTION</b></p> <p><b>注意</b></p> 	<p><b>Damage to the instrument</b> <b>仪器损坏</b></p> <p>Avoid spilling water or chemicals onto the QIASymphony SP/AS. Instrument. Damage caused by water or chemical spillage will void your warranty. 避免将水或化学品洒到 QIASymphony SP/AS 仪器上。水或化学品泼洒所致的损坏将使您失去保修权利。</p>
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<b>Important</b> <b>重要</b>	Do not place items on top of the QIASymphony SP/AS hoods. 请勿在 QIASymphony SP/AS 罩盖上放置物品。
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<b>CAUTION</b> <b>注意</b> 	<b>Damage to the instrument</b> <b>仪器损坏</b> Do not lean on the touchscreen when it is folded down. 请勿依靠在折叠下来的触摸屏上。
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<b>Important</b> <b>重要</b>	In case of emergency, switch off the QIASymphony SP/AS instruments and unplug the power cord from the power outlet. 如遇紧急情况，立即关闭 QIASymphony SP/AS 仪器电源并从电源插座上拔下电源线插头。
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## 2.2 Electrical safety 用电安全

<b>Important</b> <b>重要</b>	If operation of the instruments is interrupted in any way (e.g., due to interruption of the power supply or a mechanical error), first switch off the QIASymphony SP/AS instruments, then disconnect the electrical cord from the power supply and contact QIAGEN Technical Services. 如果仪器的运行以任何方式被中止（如，因电源或某个机械错误导致的中止），请首先关闭 QIASymphony SP/AS 仪器电源并从电源插座上拔下电源线插头，然后与 QIAGEN 技术服务部联系。
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<b>WARNING</b> <b>警告</b> 	<b>Electrical hazard</b> <b>触电危险</b> Any interruption of the protective conductor (earth/ground lead) inside or outside the instrument or disconnection of the protective conductor terminal is likely to make the instrument dangerous. Intentional interruption is prohibited. 断开仪器内部或外部的保护导体（通地/接地线）或断开保护导体终端很可能使仪器处于危险中。严禁故意断开保护导体。 <b>Lethal voltages inside the instrument</b> <b>仪器内部电压致命</b> When the instrument is connected to line power, terminals may be live. Opening covers or removing parts is likely to expose live parts
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	当仪器连着电源线时，终端可能带电，打开盖子或拆掉部件很可能暴露带电部件。
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When working with the QIASymphony SP/AS instruments:

操作 QIASymphony SP/AS 仪器时：

The line power cord must be connected to a line power outlet that has a protective conductor (earth/ground).

线路电源线必须连接到具有保护保护导体（通地/接地线）的线路电源插座上。

Do not adjust or replace internal parts of the instruments.

请勿调整或更换仪器内部零部件。

Do not operate the instruments with any covers or parts removed.

当仪器盖或部件拆除时，请勿运行仪器。

If liquid has spilled inside the instruments, switch off the instruments, disconnect them from the power outlet, and contact QIAGEN Technical Services.

如果有液体洒入仪器内部，请关掉仪器，将其与电源插座断开，并联系 QIAGEN 技术服务部门。

The instrument shall be installed in a way that the power cord is accessible.

仪器必须安装到可连接电源电缆的位置。

If the QIASymphony SP/AS instruments become electrically unsafe, prevent other personnel from operating them, and contact QIAGEN Technical Services.

如果 QIASymphony SP/AS 用电不安全，请防止其他人员使用仪器，并联系 QIAGEN 技术服务部门。

The instruments may be electrically unsafe when:

出现下列情况时，仪器可能用电不安全：

The QIASymphony SP/AS or the line power cord appears to be damaged.

QIASymphony SP/AS 或电源线似乎受损。

The QIASymphony SP/AS has been stored under unfavorable conditions for a prolonged period.

QIASymphony SP/AS 在不利条件下长时间储存。

The QIASymphony SP/AS has been subjected to severe transport stresses.

QIASymphony SP/AS 已遭受严重的运输挤压。

Liquids have come into direct contact with electrical components of the QIASymphony SP/AS.



液体进入并直接触及 QIASymphony SP/AS 仪器的电气元件。

The power cord has been exchanged with a non-official power cord.

使用非官方电源线替换了电源线。

## 2.3 Environment 环境


### 2.3.1 Operating conditions 环境

<p><b>WARNING</b> 警告</p> 	<p><b>Explosive atmosphere</b> <b>爆炸性环境</b></p> <p>The QIASymphony SP/AS is not designed for use in an explosive atmosphere. QIASymphony SP/AS 未设计在爆炸环境中使用。</p>
<p><b>WARNING</b> 警告</p> 	<p><b>Risk of overheating</b> <b>过热危险</b></p> <p>To ensure proper ventilation, maintain a minimum clearance of 5 cm (1.97 in.) at the rear of the QIASymphony SP/AS.</p> <p>Slits and openings that ensure the ventilation of the QIASymphony SP/AS must not be covered.</p> <p>为确保适当通风，在 QIASymphony SP/AS 仪器的后面应该至少保留 5 cm (1.97 in.) 的空余空间。</p> <p>不可掩盖确保 QIASymphony SP/AS 仪器通风的缝隙与开口。</p>

## 2.4 Waste disposal 废物处理

Used consumables, such as sample tubes, sample prep cartridges, 8-Rod Covers, disposable filter tips, reagent tubes, and elution racks, may contain hazardous chemicals or infectious agents from the purification or assay setup process. Such wastes must be collected and disposed of properly according to local safety regulations.

使用过的耗材，如样本管、样本制备卡夹、8 位磁棒套、一次性滤器吸头、试剂管、洗脱架等，可能含有纯化或检测构建过程中带来的有害化学品或传染剂。此类废物必须依照当地的安全法规妥善地收集和处理。

<p><b>CAUTION</b> <b>注意</b></p> 	<p><b>Hazardous materials and infectious agents</b> <b>危险材料和传染性病原体</b></p> <p>The waste contains samples and reagents. This waste may contain toxic or infectious material and must be disposed of properly. Refer to your local safety regulations for proper disposal procedures.</p> <p>废物中含有样本和试剂。此类废物可能含有有毒或传染性材料，必须正确处理。有关正确的处理程序，请参阅当地的安全法规。</p>
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For disposal of waste electrical and electronic equipment (WEEE), see Appendix A, page 314.  
有关电气和电子设备废物(WEEE)处置方法，请参阅第 206 页，附录 A。

## 2.5 Biological safety 生物安全性

<p><b>Important</b> <b>重要</b></p>	<p>Specimens and reagents containing materials from humans should be treated as potentially infectious. Use safe laboratory procedures as outlined in publications such as <i>Biosafety in Microbiological and Biomedical Laboratories</i>, HHS (<a href="http://www.cdc.gov/od/ohs/biosfty/biosfty.htm">www.cdc.gov/od/ohs/biosfty/biosfty.htm</a>).</p> <p>含人源材料的样本和试剂应作为潜在感染性材料处理。为此，请使用《HHS 微生物和生物医学实验室生物安全性》(<a href="http://www.cdc.gov/od/ohs/biosfty/biosfty.htm">www.cdc.gov/od/ohs/biosfty/biosfty.htm</a>) 等出版物中概述的安全实验室程序。</p>
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## 2.5.1 Samples

### 样本

<p><b>WARNING</b> <b>警告</b></p> 	<p><b>Samples containing infectious agents</b> <b>含传染性病原体的样本</b></p> <p>Some samples used with this instrument may contain infectious agents. Handle such samples with the greatest of care and in accordance with the required safety regulations.</p> <p>此仪器使用的一些样本可能含有传染性病原体。要非常小心地按照要求的安全性法规处理此种样本。</p> <p>Always wear safety glasses, gloves, and a lab coat.</p> <p>始终穿戴安全防护镜、两双手套和实验服。</p> <p>The responsible persons (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe, and that the instrument operators are suitably trained and not exposed to hazardous levels of infectious agents as defined in the applicable Safety Data Sheets (SDSs) or OSHA,* ACGIH,<sup>†</sup> or COSHH<sup>‡</sup> documents.</p> <p>负责人（例如：实验室经理）必须采取必要的预防措施确保工作场所安全，以及仪器操作人员应经过适当培训，不会接触到有害水平的相关材料安全性数据单（SDSs）或 OSHA，* ACGIH，<sup>†</sup> 或 COSHH<sup>‡</sup> 文件中规定的传染性病原体。</p> <p>Venting for fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws. 排烟和废物处理必须符合国家、州或地方的健康安全法律法规。</p>
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\* OSHA: Occupational Safety and Health Administration (United States of America).

<sup>†</sup> ACGIH: American Conference of Government Industrial Hygienists (United States of America).

<sup>‡</sup> COSHH: Control of Substances Hazardous to Health (United Kingdom).

\* OSHA : 职业安全与卫生管理局 (美国)


<sup>†</sup> ACGIH : 美国工业卫生师协会 (美国)

<sup>‡</sup> COSHH : 有害物质控制规章 (英国)

<p><b>Important</b> <b>重要</b></p>	<p>Samples may contain infectious agents. You should be aware of the health hazard presented by such agents and should use, store, and dispose of such samples in accordance with the required safety regulations.</p> <p>样本可能含有传染性病原体。您应知道此种物质的健康危害，并按照要求的安全性法规使用、储存和处理此种样本。</p>
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## 2.6 Chemicals 化学品


<p><b>WARNING</b> <b>警告</b></p> 	<p><b>Hazardous chemicals</b> <b>危险化学品</b></p> <p>Some chemicals used with the QIASymphony SP/AS instruments may be hazardous or may become hazardous after completion of the protocol run.</p> <p>QIASymphony SP/AS 仪器使用的一些化学品可能存在危险性或者在完成程序运行后变得有危险性。</p> <p>Always wear safety glasses, gloves, and a lab coat.</p> <p>始终穿戴安全防护镜、手套和实验服。</p> <p>The responsible persons (e.g., laboratory manager) must take the necessary precautions to ensure that the surrounding workplace is safe and that the instrument operators are not exposed to hazardous levels of toxic substances (chemical or biological) as defined in the applicable Safety Data Sheets (SDSs) or OSHA,* ACGIH,<sup>†</sup> or COSHH<sup>‡</sup> documents.</p> <p>负责人（例如：实验室经理）必须采取必要的预防措施确保工作场所安全，以及仪器操作人员不会接触到危害水平的相关安全性数据单（SDSs）或 OSHA*、ACGIH<sup>†</sup> 或 COSHH<sup>‡</sup>文件中规定的毒性物质（化学品或生物制品）。</p> <p>Venting for fumes and disposal of wastes must be in accordance with all national, state, and local health and safety regulations and laws.</p> <p>排烟和废物处理必须符合国家、州或地方的健康安全法律法规。</p>
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\* OSHA: Occupational Safety and Health Administration (United States of America).  
† ACGIH: American Conference of Government Industrial Hygienists (United States of America).  
‡ COSHH: Control of Substances Hazardous to Health (United Kingdom).  
\* OSHA : 职业安全与卫生管理局 (美国)  
† ACGIH : 美国工业卫生师协会 (美国)  
‡ COSHH : 有害物质控制规章 (英国)

### 2.6.1 Toxic fumes

#### 有毒烟雾

<b>Important</b> <b>重要</b>	<p>If you work with volatile solvents, toxic substances, etc., you must provide an efficient laboratory ventilation system to remove vapors that may be produced.</p> <p>如果使用挥发性溶剂或毒性物质，必须提供高效的实验室通风系统，以驱散可能产生的蒸汽。</p>
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<b>WARNING</b> <b>警告</b> 	<p><b>Toxic fumes</b> <b>有毒烟雾</b></p> <p>Do not use bleach to clean or disinfect QIASymphony SP/AS instruments. Bleach in contact with salts from the buffers can produce toxic fumes.</p> <p>不可使用漂白剂清洁或消毒 QIASymphony SP/AS 仪器。漂白剂与缓冲剂中的盐类相接触可产生有毒烟雾。</p>
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<b>WARNING</b> <b>警告</b> 	<p><b>Toxic fumes</b> <b>有毒烟雾</b></p> <p>Do not use bleach to disinfect used labware. Bleach in contact with salts from the buffers used can produce toxic fumes.</p> <p>不可使用漂白剂消毒用过的器具。漂白剂与缓冲剂中的盐类相接触可产生有毒烟雾。</p>
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### 2.7 Mechanical hazards


#### 机械危害

The hoods of the QIASymphony SP/AS instruments must remain closed during operation. Only open the hoods when instructed to do so by the software.

QIASymphony SP/AS 仪器的防护罩在运行过程中必须保持关闭。仅当软件指示这样做时才能打开防护罩。

<b>WARNING</b> <b>警告</b> 	<p><b>Moving parts</b> <b>移动部件</b></p> <p>To avoid contact with moving parts during operation of QIASymphony SP/AS instruments, the instruments must be operated with the hoods closed. If the hood sensors are not functioning correctly, contact QIAGEN Technical Services.</p>
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	避免在 QIAsymphony SP/AS 运转期间接触到移动部件。仪器必须在防护罩关闭状态下运行。如果防护罩传感器未正常工作，请联系 QIAGEN 技术服务部。
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<b>WARNING</b> <b>警告</b> 	<p><b>Strong magnetic field</b>  <b>强磁场</b></p> <p>Do not place QIAsymphony SP/AS instruments near magnetic storage systems (e.g., computer discs).</p> <p>不可将 QIAsymphony SP/AS 仪器靠近磁存储器（如计算机磁盘）放置。</p> <p>Do not use metal tools when handling the magnetic rods.</p> <p>当处理磁棒时不可使用金属工具。</p> <p>Do not allow the magnetic rods to come into contact with other magnets.</p> <p>不可让磁棒与其他磁体接触。</p>
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<b>CAUTION</b> <b>注意</b> 	<p><b>Damage to the instrument(s)</b>  <b>仪器损坏</b></p> <p>Make sure to install the magnetic-head guards before operating the QIAsymphony SP.</p> <p>运行 QIAsymphony SP 前，请确保已安装了磁头保护套。</p>
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## 2.8 Heat hazard 热危害

The QIAsymphony SP supports a lysis station that can be heated, if required by the protocol. In addition, both the QIAsymphony SP and the QIAsymphony AS support a UV lamp. 如果程序要求，QIAsymphony SP 支持可加热的裂解台。此外，QIAsymphony SP 和 QIAsymphony AS 均支持 UV 灯。

<b>WARNING</b> <b>警告</b> 	<p><b>Hot surface</b>  <b>热的表面</b></p> <p>The lysis station and the UV lamps can reach temperatures of up to 70°C (158°F). Avoid touching them during operation.</p> <p>裂解台和 UV 灯均可达到最高 70°C (158°F) 的温度。避免在运行过程中接触它们。</p>
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## 2.9 Maintenance safety 维护安全性


<p><b>WARNING/ CAUTION</b> 警告/ 注意</p> 	<p><b>Risk of personal injury and material damage</b> <b>人身伤害与材料损坏风险</b></p> <p>Only perform maintenance as described in this consolidated operating guide. 仅可执行本操作说明描述的维护操作。</p>
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Perform the maintenance as described in Section 14.

请按照 14 节所述开展维护操作。


QIAGEN charges for repairs that are required due to incorrect maintenance.


对于由于不当维护而引起的修复工作，QIAGEN 会收取维修费用。


<p><b>WARNING / CAUTION</b> 警告/ 注意</p> 	<p><b>Risk of personal injury and material damage</b> <b>人身伤害与材料损坏风险</b></p> <p>Improper use of QIAsymphony SP/AS instruments may cause personal injuries or damage to the instruments. QIAsymphony SP/AS 仪器使用不当可导致人身伤害或仪器损坏。</p> <p>QIAsymphony SP/AS instruments must only be operated by qualified personnel who have been appropriately trained. QIAsymphony SP/AS 必须仅由经过适当培训的合格人员操作。</p> <p>Servicing of QIAsymphony SP/AS instruments must only be performed by QIAGEN Field Service Specialists. QIAsymphony SP/AS 的维修必须仅由 QIAGEN 的现场维修专员完成。</p>
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<p><b>WARNING</b> 警告</p> 	<p><b>Risk of fire</b> <b>着火危险</b></p> <p>When cleaning QIAsymphony SP/AS instruments with alcohol-based disinfectant, leave the instrument hoods open to allow flammable vapors to disperse. 当用含酒精的消毒剂清洁 QIAsymphony SP/AS 仪器时，保持仪器罩打开以驱散</p>
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	<p>易燃蒸汽。</p> <p>Only clean QIASymphony SP/AS instruments with alcohol-based disinfectant when worktable components have cooled down.</p> <p>仅可在工作台部件冷却后使用含酒精的消毒剂清洁 QIASymphonySP/AS 仪器。</p>
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<p><b>CAUTION</b> 注意</p> 	<p><b>Damage to the instrument(s)</b> <b>仪器损坏</b></p> <p>Do not use bleach, solvents, or reagents containing acids, alkalis, or abrasives to clean QIASymphony SP/AS instruments.</p> <p>不可使用漂白剂、溶剂、含酸、碱的溶剂或试剂，或研磨剂清洁 QIASymphony SP/AS 仪器。</p>
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<p><b>CAUTION</b> 注意</p> 	<p><b>Damage to the instrument(s)</b> <b>仪器损坏</b></p> <p>Do not use spray bottles containing alcohol or disinfectant to clean surfaces of the QIASymphony SP/AS instruments. Spray bottles should be used only to clean items that have been removed from the worktables.</p> <p>不可使用含酒精或消毒剂的喷雾瓶清洁 QIASymphony SP/AS 仪器的表面。喷雾瓶应仅用于清洁已从工作台卸除的物品。</p>
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<p><b>CAUTION</b> 注意</p> 	<p><b>Damage to the instrument hood(s) or side panels</b> <b>仪器防护罩或侧面板损坏</b></p> <p>Never clean the instrument hood(s) or side panels with alcohol or alcohol-based solutions. Alcohol will damage the hood and the side panels. To clean the hood(s) and side panels, use distilled water.</p> <p>切勿用酒精或含酒精的溶液清洁仪器罩或侧面板。酒精将损害罩和侧面板。使用蒸馏水清洁罩和侧面板。</p>
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<p><b>CAUTION</b> 注意</p> 	<p><b>Damage to the instrument(s)</b> <b>仪器损坏</b></p> <p>After wiping the drawers and lysis station with paper towels, make sure that no bits of paper towel remain. Pieces of paper towel remaining on the worktable could lead to a worktable collision.</p> <p>用纸巾擦拭抽屉和裂解台后，确保无纸巾碎屑残留。纸巾碎屑残留在工作台可导致工作台碰撞。</p>
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<p><b>WARNING</b> 警告/ <b>CAUTION</b> 注意</p> 	<p><b>Risk of personal electric shock</b> <b>触电危险</b></p> <p>Do not open any panels on the QIASymphony SP/AS instruments.</p> <p>不可打开 QIASymphony SP/AS 仪器的任何面板。</p> <p>Only perform maintenance as described in this consolidated operating guide.</p> <p>只可进行本操作说明中所述的维护操作。</p>
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<p><b>CAUTION</b> 注意</p> 	<p><b>Damage to the instrument(s)</b> <b>仪器损坏</b></p> <p>Make sure to install the tip guards correctly before operating QIASymphony SP/AS instruments.</p> <p>确保在操作 QIASymphony SP/AS 仪器前安装吸头防护装置。</p>
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<p><b>CAUTION</b> 注意</p> 	<p><b>Damage to the instrument(s)</b> <b>仪器损坏</b></p> <p>Make sure to install the magnetic-head guards before operating the QIASymphony SP.</p> <p>确保在操作 QIASymphony SP 仪器前安装磁头防护装置。</p>
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## 2.10 Radiation safety 辐射安全


<p><b>WARNING</b> 警告</p> 	<p><b>Risk of personal injury</b> <b>人身伤害风险</b></p> <p>Do not expose your skin to UV-C light (254 nm) from the UV lamp.</p> <p>请勿将皮肤暴露于 UV 灯发出的 UV-C 光 (254 nm)。</p>
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<b>WARNING</b> <b>警告</b> 	<b>Risk of personal injury</b> <b>人身伤害风险</b> Hazard Level 2 laser light: Do not stare into the light beam. 2 级危险激光：请勿凝视光束。
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## 2.11 Symbols on the QIASymphony SP/AS instruments QIASymphony SP/AS 仪器上的标志






The following symbols appear on both the QIASymphony SP and QIASymphony AS instruments, except the heat hazard symbol, which appears only on the QIASymphony SP.

QIASymphony SP 和 QIASymphony AS 仪器上均带有以下标志，热危险标志仅 QIASymphony SP 仪器带有。

Symbol 标志	Location 位置	Description 描述
	Lysis station 裂解台	Heat hazard — the temperature of the lysis station can reach up to 70°C (158°F) 热危险 — 裂解台温度可达 70°C(158°F)
	QIASymphony SP — near the tip rack slots/tip disposal bag QIASymphony AS — on the worktable, near the magnetic lock of the hood QIASymphony SP — 靠近吸头架槽/吸头处理袋 QIASymphony AS —工作台上，靠近防护罩的磁锁	Biohazard — the tip rack slots, waste, and the worktable may be contaminated with biohazardous material and must be handled with gloves 生物危害 — 吸头架槽、废弃物和工作台可能污染生物有害物质，必须带手套处理
	Robotic arm — operator facing panel Adjacent to the crushing hazard label on the robotic arm 机械臂 — 操作面板 机械臂上的挤压危险标签附近	Turn off the UV lamp before opening the lid or for servicing. During decontamination, the housing must remain closed. Avoid looking directly into UV light. Do not expose your skin to UV light. 关闭 UV 灯，然后再打开盖子或进行维修。去污期间，外壳必须保持

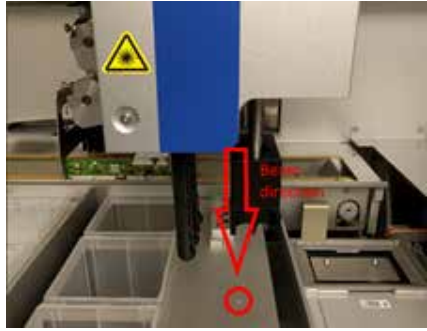
Symbol 标志	Location 位置	Description 描述
		关闭状态。 避免直视紫外线光源。不可让皮肤暴露在紫外线光源下
	Robotic arm — operator facing panel 机械臂 — 操作面板	Moving parts – make sure to keep the hood and drawers closed during operation 移动部件 – 在操作期间确保挂钩和抽屉关闭
	Next to the type plate on the back of the instrument 仪器背面铭牌旁	Laser radiation — do not stare into the beam 激光辐射 — 请勿凝视光束
	Position 1: Robotic arm — behind the sample input lid* 位置 1：机械臂 — 样本输入盖后*	Hazard Level 2 laser light — do not stare into the beam Bar code scanner (BCL8) Laser Class 2 (655 nm) 2 级危险激光 — 请勿凝视光束 条形码扫描仪 (BCL8) 2 类激光 (655 nm)
	Position 2: Robotic Arm — operator facing panel† 位置 2：机械臂 — 操作面板†	Hazard Level 2 laser light — do not stare into beam Laser displacement sensor (OADM13) Laser Class 2 (650 nm) 2 级危险激光 — 请勿凝视光束 激光位移传感器 (OADM13) 2 类激光 (650 nm)
	Type plate on the back of the instrument 仪器背面铭牌	CE mark for Europe 欧洲共同体 CE 标志
	Type plate on the back of the instrument 仪器背面铭牌	CSA listing mark for Canada and the USA 加拿大和美国的 CSA 认证标志
	Type plate on the back of the instrument 仪器背面铭牌	CB mark of the IECEE member states IECEE 成员国 CB 标志
	Type plate on the back of the instrument 仪器背面铭牌	FCC mark of the United States Federal Communications Commission 美国联邦通讯委员会 FCC 标志



Symbol 标志	Location 位置	Description 描述
	Type plate on the back of the instrument 仪器背面铭牌	RCM (former C-Tick) for Australia (supplier identification N17965) 澳大利亚 C-勾号标志 ( 供应商识别码 N17965 )
	Type plate on the back of the instrument 仪器背面铭牌	RoHS mark for China (the restriction of the use of certain hazardous substances in electrical and electronic equipment) 中国 RoHS 标志 ( 电子电器设备中某些有害物质的使用限制 )
	Type plate on the back of the instrument 仪器背面铭牌	WEEE mark for Europe 欧盟 WEEE 标志
	Type plate on the back of the instrument 仪器背面铭牌	Legal manufacturer 合法制造商
	On the worktable 工作台上	Consult instructions for use 咨询使用说明



\*激光警告标签位置 1。



†激光警告标签位置 2。

## 3 Startup Procedure 启动程序

The unpacking and installation of QIASymphony SP/AS instruments is carried out by a certified QIAGEN Field Service Specialist. A member of your group who is familiar with laboratory and computer equipment should be present during the installation.

QIASymphony SP/AS 仪器的开箱和安装均由经认证的 QIAGEN 现场服务专员执行。安装过程中，您所属部门熟悉实验室和计算机设备的成员应当在场。


See “Packing List QIASymphony SP” and “Packing List QIASymphony AS” for a full list of components that are supplied with each instrument.

参见“包装清单 QIASymphony SP”和“包装清单 QIASymphony AS”获取随仪器附送组件的完整清单。这些清单随仪器交货。

### 3.1 Site requirements 场所要求

The QIASymphony SP/AS must be located out of direct sunlight, away from heat sources, and away from sources of vibration and electrical interference. The site of installation should be free of excessive drafts, excessive moisture, excessive dust, and not subject to large temperature fluctuations.

QIASymphony SP/AS 仪器必须放置在阳光直射以外、远离热源及远离震动源和电磁干扰的地方。安装场所应当远离过度气流、过度湿气、过量灰尘并且温度波动不宜过大。

<p><b>WARNING</b> <b>警告</b></p> 	<p><b>Risk of overheating</b> <b>过热危险</b></p> <p>To ensure proper ventilation, maintain a minimum clearance of 5 cm (1.97 in.) at the rear of the QIASymphony SP/AS.</p> <p>Slits and openings that ensure the ventilation of the QIASymphony SP/AS must not be covered.</p> <p>为确保适当通风，QIASymphony SP/AS 仪器两侧和后面应至少保持 5cm 的间隙（1.97 英寸）。</p> <p>不当掩盖确保 QIASymphony SP/AS 仪器通风的狭缝和开口。</p>
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### 3.1.1 Workbench 工作台

We recommend positioning QIASymphony SP/AS instruments on the QIASymphony Cabinet SP/AS, which is not included in the equipment supplied.

我们建议在 QIASymphony 柜式 SP/AS 上放置 QIASymphony SP/AS 仪器，尽管该产品不属于设备随附的物品。

If you position QIASymphony SP/AS instruments on an alternative workbench, ensure that it is large enough and strong enough to accommodate the instruments. Ensure that the workbench is dry, clean, vibration proof, and has additional space for accessories. 如果您在其他工作台上放置 QIASymphony SP/AS 仪器，请确保其面积及强度都足以容纳这两款仪器。请确保工作台干燥、洁净、防震，且留有存放附件的额外空间。

<b>Important</b> <b>重要</b>	<p>It is extremely important that QIASymphony SP/AS instruments are placed on a stable surface.</p> <p>请务必将 QIASymphony SP/AS 仪器放在稳定的台面上。</p>
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See Section 15 for the weight and dimensions of QIASymphony SP/AS instruments.

关于 QIASymphony SP/AS 仪器的重量和尺寸规格，请参阅第 15 节。

For further information about required specifications of the workbench, contact QIAGEN Technical Services.

如需详细了解工作台必需的规格，请咨询 QIAGEN 技术服务部门。

## 3.2 General features 一般特性

### 3.2.1 Hood(s) 防护罩

The instrument hood(s) protects users from the moving robotic arm and from potentially infectious material on the worktable. The hood(s) can be manually opened to gain access to the worktable (e.g., for cleaning). During operation of the QIASymphony SP and/or the QIASymphony AS, the hood(s) must remain closed and should only be opened when instructed to do so by the software.

仪器防护罩保护用户不受工作台上移动着的机械臂和潜在传染性物质的侵害。可通过手动打开防护罩来接触到工作台（如，进行清洁）。QIASymphony SP 运行过程中，仪器的防护罩必须保持关闭状态，只有在软件指示打开时方可打开。

The hood(s) is locked:

以下情形下，防护罩处于锁定状态：

During sample preparation on the QIASymphony SP

During an assay run on the QIASymphony AS

在 QIASymphony SP 上进行样本制备过程中

在 QIASymphony AS 上运行检测实验时

If force is used to open the hoods during a run, the run will be paused.

如果在一个运行过程中通过外力打开了防护罩，则该运行将暂停。

<b>Important</b> <b>重要</b>	<p>If the hoods are opened during a run, the instruments will not immediately stop. The instruments will stop when processing of the current protocol step is finished. In some cases, this may take some time. 如果防护罩在实验运行过程中被打开，仪器将不会立即停止运行。仪器将会在当前程序步骤结束时停止。在某些情况下，这可能需要花费一些时间。</p>
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### 3.2.2 Touchscreen

#### 触摸屏

The QIASymphony SP/AS is controlled using a swivel-mounted touchscreen. The touchscreen allows the user to, for example, select and run protocols, and upload/download files (e.g., Assay Control Sets) from/to a USB stick. QIASymphony SP 仪器通过旋转挂式触摸屏控制。触摸屏允许用户操作，例如选择和运行程序，及从 USB 盘上传/下载文件（例如：检测对照集）。

### 3.2.3 USB ports

#### USB 接口

The USB ports at the front left and front right of the QIASymphony SP allow connections of the QIASymphony SP/AS to a USB stick and a handheld bar code scanner (supplied with the QIASymphony SP). New protocols, Assay Control Sets, new labware files (e.g., files enabling new types of tubes to be used with the QIASymphony SP), and work lists can be uploaded to the QIASymphony SP via the USB port. Data files, such as system log files, report files, loading information files, and rack files can also be transferred via the USB port from the QIASymphony SP to the USB stick.

QIASymphony SP 左前侧和右前侧的 USB 接口可使 QIASymphony SP 与 USB 盘或手持式条形码扫描仪相连（随 QIASymphony SP 提供）。可通过 USB 接口上传新程序、检测对照集、新器具文件（如，可使 QIASymphony SP 使用新类型试管的文件）及工作列表到 QIASymphony SP。也可通过 USB 接口将数据文件如系统日志文件、报告文件、加载信息文件及架文件从 QIASymphony SP 传输到 USB 盘。

<b>Important</b> <b>重要</b>	Do not remove the USB stick while downloading or uploading files. 下载或上传文件时，请勿移走 USB 盘。
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#### 3.2.4 Network interface 网络接口

The network interface allows connections of the QIASymphony SP/AS instruments to a network via a CAT5 ethernet network cable.

网络接口可使 QIASymphony SP 通过 CAT5 以太网网线连接到网络。

#### 3.2.5 Status LEDs 状态 LED 灯

Light-emitting diodes (LEDs) at the front of QIASymphony SP/AS instruments are illuminated when sample preparation or assay setup is in progress. The status LEDs flash when a batch/run is finished or if an error occurs. Touching the screen turns off the flashing. 在样本制备或检测构建进行中，位于 QIASymphony SP/AS 仪器前部的发光二极管(LED)呈发光状态。当一个批/运行结束时或发生错误时，状态 LED 灯将闪烁。触摸屏幕可关闭闪烁。

### 3.3 Switching on the QIASymphony SP/AS 开启 QIASymphony SP/AS

#### 3.3.1 Getting started 启动



#### 3.3.1.1 Preparing the QIASymphony SP/AS before startup QIASymphony SP/AS 启动前准备

<b>Important 重要</b>	An empty unit box must be placed into slot 4 of the “Reagents and Consumables” drawer because, during initialization, the handler goes down into the unit box in position 4. If the unit box is not empty, the handler will crash. 必须在“试剂和耗材”的槽 4 中放入孔单元匣，因为在系统初始化过程中，移液器会下移到位置 4 的单元匣内。如果该单元匣不为空，移液器可能会与其中的成分发生碰撞。
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1. Make sure that the liquid waste bottle, waste bags, and waste containers are empty.  
确认废液瓶、废料袋以及废弃物容器均已清空。
2. Make sure that all drawers and both hoods are closed. If the hood(s) is opened during instrument startup, the system test will fail.

After successful startup, QIASymphony SP/AS instruments are ready for use. The **Sample Preparation** screen will be displayed.

成功启动后，QIASymphony SP/AS 仪器即已准备就绪。随即显示“**样本制备**”界面。



Note that the image above was made with a QIASymphony SP instrument (not a QIASymphony SP/AS instrument).

请注意，上述图像截自 QIASymphony SP 仪器（而非 QIASymphony SP/AS 仪器）。

<b>Important</b> <b>重要</b>	<p>Before using the QIASymphony SP/AS, the user must log in.</p> <p>使用 QIASymphony SP/AS 之前，用户必须先登录。</p> <p>For information about user accounts, see Section 4.2.</p> <p>有关用户账户的信息，请参阅第 4.2 节。</p>
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### 3.3.2 Logging out 注销

After pressing the **Run** button, you have the option to log out. The run will continue. 按下“**运行**”按钮后，您可以选择注销。注销之后，运行仍将继续进行。

### 3.3.2.1 Active logout 主动注销



To log out, press **Log Out** at the top of the **Sample Preparation** or **Assay Setup** screen.

如要注销，可按“**样本制备**”或“**检测构建**”界面顶部的注销。



If you are logged out, the status bar only displays the date and time.

如果您已经注销，则状态栏只会显示日期和时间。

### 3.3.2.2 Automatic logout 自动注销

After a defined period of user inactivity, the user currently logged in is automatically logged out. The default setting for this period of user inactivity is 15 minutes. Ask the “Supervisor” to adjust the time period to suit your needs or to switch it off, if required. 如果用户指定时间内无活动，则当前登陆用户会自动注销。此用户无活动时长默认设定为 15 分钟。如有需要，请求“管理员”修改此时长以适应您的需要或根据需要将其关闭。

### 3.3.3 Switching off the QIASymphony SP/AS 关闭 QIASymphony SP/AS

To switch off the QIASymphony SP/AS instruments, press the power switch at the front of the QIASymphony SP in the lower left corner. We recommend switching off the instruments after use. 要关闭 QIASymphony SP/AS 仪器，请按 QIASymphony SP 前部左下角的电源开关。我们建议使用后断开仪器电源。

<b>Important</b> <b>重要</b>	<p>Do not switch off the instruments during sample preparation or assay setup unless you need to stop the instruments due to an emergency. You will not be able to resume the protocol or assay run and the samples cannot be processed further by the QIASymphony SP/AS.</p> <p>在样本制备或检测构建过程中，不得关闭仪器，除非您因紧急情况需要停止仪器。这种情况下您将无法恢复程序或检测构建的运行，QIASymphony SP/AS 也无法进一步处理样本。</p>
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<b>Important</b> <b>重要</b>	<p>The QIASymphony SP/AS instruments will lose all inventory information when the instruments are switched off.</p> <p>当仪器关闭时，QIASymphony SP/AS 仪器将丢失所有库存信息。</p>
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<b>Important</b> <b>重要</b>	<p>After the QIASymphony SP/AS instruments are switched off, the power switch flashes a few times. When the power switch stops flashing it is safe to switch the QIASymphony SP/AS instruments on again.</p> <p>关闭 QIASymphony SP/AS 仪器后，电源开关将闪烁几次。当电源开关停止闪烁时，再次打开 QIASymphony SP/AS 是安全的。</p>
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## 4 User Settings 用户设置

### 4.1 Configuration settings 配置设置

<b>Important 重要</b>	The “Supervisor” can configure the systems settings. “管理员”可配置系统设置。
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For more information, refer to Section 6, “Configuration”, of the *QIAsymphony SP/AS User Manual — General Description*.

更多信息，请参阅“QIAsymphony SP/AS 用户手册 — 概述”第 6 节“配置”。

### 4.2 User accounts 用户账户

The QIAsymphony SP/AS recognizes 2 different user roles:

QIAsymphony SP/AS 可识别 2 种不同的用户身份：

Supervisor 管理员	<p>The “Supervisor” role enables preparation and running of batches and assay runs. The “Supervisor” can configure the users, default tube types for the QIAsymphony SP, and adapters/holders for the QIAsymphony AS. The “Supervisor” can also configure the system and define custom configuration profiles. In addition, the “Supervisor” can:</p> <p>“管理员”用户身份允许制备和运行批和检测运行。“管理员”可配置用户、QIAsymphony SP 的默认试管类型，及 QIAsymphony AS 的适配器/基座。“管理员”还可配置系统和定义自定义配置文件。此外，“管理员”还可进行：</p> <p>Transfer input and output files, process files, and most instrument setup files from QIAsymphony SP/AS instruments to the USB stick. 从 QIAsymphony SP/AS 仪器传输输入和输出文件、处理文件和大多数的仪器设置文件至 USB 盘。</p> <p>Transfer rack files, work list files, process files, and most instrument setup files from the USB stick to the QIAsymphony SP/AS instruments. 从 USB 盘传输架文件、工作列表文件、处理文件和大多数仪器设置文件至 QIAsymphony SP/AS 仪器。</p> <p>Manage the user account for other users; they can also adjust the configuration</p>
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	<p>settings.</p> <p>在 QIAsymphony SP/AS 仪器和 USB 盘之间同步架文件、工作列表文件、处理文件和大多数仪器设置文件。</p>
Operator 操作员	<p>The “Operator” role enables preparation and running of batches and assay runs. In addition, the “Operator” can:</p> <p>“ 操作员 ” 允许制订和运行批和检测运行。此外，“ 操作员 ” 还可进行：</p> <p>Transfer input and output files from QIAsymphony SP/AS instruments to a USB stick. 从 QIAsymphony SP/AS 仪器输入和输出文件至 USB 盘。</p> <p>Transfer rack files and work lists from a USB stick to the QIAsymphony SP/AS instruments. 从 QIAsymphony SP/AS 仪器传输架文件和工作列表至 QIAsymphony SP/AS 仪器。</p>

Before operating the QIAsymphony SP/AS, the user accounts must be defined.

操作 QIAsymphony SP/AS 之前，必须先定义用户账户。

If no user is logged in, all drawers are locked.

如果用户未登录，则所有抽屉均会被锁定。

#### 4.2.1 Create new users 创建新用户

The “Supervisor” must use the following default password the first time they log in: **ie2ad**.  
“ 管理员 ” 用户在首次登入时，必须使用默认密码：**ie2ad**。

To create new users or to reset user passwords, follow the steps below.  
要创建新用户或重设用户密码，请遵循以下说明。



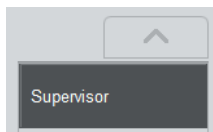
1. Log in as “Supervisor”.  
以“管理员”身份登录。

The **Please select user:** screen will open.  
随即打开 “ **请选择用户：** ” 界面。

2. Select the "Supervisor" button.  
选择 "Supervisor" ( 管理员 ) 按钮。

The **Please enter password** screen will open.

随即打开 " 请输入密码 " 界面。



3. Enter the password in the blue field and confirm with **OK**.  
在蓝色字段输入密码，并点击 " OK " 确认。

**Note:** If you are logging in as "Supervisor" for the first time, you must change the default supervisor password. To do this, follow the instructions in the touchscreen.

注意：如果您首次以 " Supervisor " 身份登录，必须更改默认管理员密码。为此，请遵照触摸屏上的说明操作。

The **Sample Preparation** screen will be displayed again.

随即再次显示 " 样本制备 " 界面。



The "Supervisor" user ID is now visible in the status bar on the lower right. 此时，即会在右下角状态栏显示 " Supervisor " 用户 ID。

4. Press the **Tools** tab.  
点击 " 工具 " 选项卡。



The **Tools** menu will be displayed.

随即显示 " 工具 " 菜单。

5. Press the **User Management** button.  
点击 " 用户管理 " 按钮。



The User overview/Please Select User screen appears.

随即显示 " 用户概览 " / " 请选择用户 " 界面。

6. Press the **Add User** button.  
点击 " 添加用户 " 按钮。



The **Create User** screen appears.

随即显示 " 创建用户 " 界面。

7. Enter new user settings in the blue fields and confirm with **Next**.  
在蓝色字段输入新用户设置，然后点击 " 下一步 " 确认。



The **Assign Roles** screen appears.

随即显示 " 分配身份权限 " 界面。

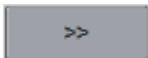


8. Select the role of the user account to be created.

选择希望创建的用户账户身份。

The selected role will be highlighted inverse.

选中的用户身份将会反白高亮显示。

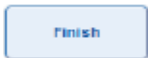


9. Press the arrow button to assign the selected role to the newly created user account.

按下箭头按钮，为新建的用户账户分配选定的身份权限。

The new user will be added to **User Roles**.

新用户将会添加到“**用户身份权限**”之中。



10. Press **Finish**. The login information of the newly created user account will be saved.

#### 4.2.2 Activate/inactivate user accounts

##### 激活/禁用用户账户

User accounts cannot be deleted. The user with the “Supervisor” user ID must deactivate the user account so that it is no longer displayed in the **Activated Users** list.

用户账户无法删除。具有“Supervisor”（管理员）用户 ID 的用户必须停用用户账户，以便使其不再“**已激活的用户**”列表中显示。

To inactivate/activate a user account, follow the steps below.

为激活/禁用用户账户，请遵守如下步骤。



1. Log in as “Supervisor”.

以“Supervisor”（管理员）身份登录。

See steps 1–3 of Section 4.2.1 for more information.

更多信息请参阅第 4.2.1 节步骤 1-3。



2. Press the **Tools** tab.

点击“**工具**”选项卡。

The **Tools** menu will be displayed.

随即显示“**工具**”菜单。

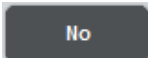
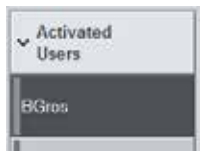


3. Press the **User Management** button.

点击“**用户管理**”按钮。

The **User overview/Please Select User** (“Supervisor login”) screen appears.

随即显示“用户概览/请选择用户”（Supervisor 身份登录）界面。

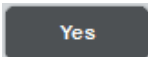
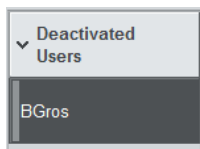


4. **Deactivation:** Select the user name from the list in the **Activated Users** package and press the **No** button.

**禁用：**从“**已激活的用户**”列表中选择用户名，然后点击“**否**”按钮。

The selected user will be removed from the list and transferred to the **Deactivated Users** list.

选定的用户将会从列表中移除，并转移到“**已禁用的用户**”列表中。



5. **Activation:** Select the user name from the list in the **Deactivated Users** package and press the **Yes** button.

**激活：**从“**已禁用的用户**”列表中选择用户名，然后点击“**是**”。

The selected user will be removed from the list and transferred to the **Activated Users** list.

选定的用户将会从列表中移除，并转移到“**已激活的用户**”列表中。



6. Press **Save** to confirm the changes.

点击“**保存**”确认更改。

#### 4.2.3 System request for password change 密码更改系统请求

You may be prompted by the instrument software to enter a new password. This may happen the first time you log in, after the “Supervisor” resets your password, or if your password has expired. 您可以根据仪器软件提示输入新密码。这一过程发生在首次登录、“Supervisor”重置您的密码以及密码过期时。

<b>Important</b> <b>重要</b>	<p>Passwords expire after 60 days by default.</p> <p>默认情况下，密码 60 天过期。</p>
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This setting can be changed by the “Supervisor” in the **Configuration** menu in the **System 1** tab. It is also possible to deactivate the password expiration setting. “Supervisor” 可通过“**系统 1**”选项卡下的“**配置**”菜单，更改这一设置。此外，通过这一菜单还可禁用密码过期设置。

If a password has expired, you will be prompted to enter a new password after logging in.

如果密码过期，在您登录后系统会提示输入新密码。

To change your password, follow the steps below.

如要修改密码，可遵照下述步骤进行。

New Password:

新密码:

OK

1. Press **New Password** text field.

点击“新密码”字段。

The **Keyboard** screen appears.  
随即显示键盘界面。

2. Enter a new password and press **OK**.

输入新密码并点击“OK”。

The **Login/Please enter your new password** screen appears again.  
随即再次显示“登录/请输入新密码”界面。

Confirm new Password:

3. Press **Confirm new Password** text field.

点击“确认新密码”字段。

确认新密码:

The **Keyboard** screen appears again.

随即再次出现键盘界面。

4. Enter the new password again to confirm it.

再次输入新密码以确认。

5. Press **OK**.



The **Login/Please enter your new password** screen will appear again.

随即再次显示“**登录/请输入新密码**”界面。

#### 4.2.4 User request for password change 用户请求修改密码

It is also possible to change your password independently of the password expiration.  
您可以单独更改已经过期的密码。

1. Press **Log In** and select your user name from the list.

点击“**登录**”，从列表中选择您的用户名。



The **Keyboard** screen appears.

随即出现键盘界面。

2. Enter your password and confirm with **OK**.

输入您的密码并点击“**OK**”确认。



The **Sample Preparation** screen appears.

随即出现“**样本制备**”界面。

3. Press the **Tool** tab and select **User Management**.

点击“**工具**”选项卡并选择“**用户管理**”。



The **User Overview/Your user data** screen appears.

随即出现“**用户概览/您的用户数据**”界面。

4. Press **Change PWD**.

点击“**更改密码**”。



The **User Overview/Please enter your new password** screen appears.

随即出现“**用户概览/请输入新密码**”界面。

Old Password:

5. Press **Old Password** text field.

点击“**旧密码**”字段。



6. Enter the old password in the **Keyboard** screen and press **OK**.

通过键盘界面输入旧密码并点击“**OK**”。





The **User Overview/Please enter your new password** screen appears again.

随即再次出现“**用户概览/请输入新密码**”界面。

New Password:

新密码:

7. Press **New Password** text field.

点击“**新密码**”字段。

8. Enter a new password in the **Keyboard** screen and press **OK**.

通过键盘界面输入旧密码并点击“OK”。

OK

The **User Overview/Please enter your new password** screen appears again.

随即再次出现“**用户概览/请输入新密码**”界面。

Confirm new Password:

确认新密码:

9. Press **Confirm new Password** text field.

点击“**确认新密码**”字段。

10. Confirm the new password and press **OK**.

确认新密码并点击“OK”。

OK

The new password is now active.

新密码现已激活。

## 4.3 Language package installation 语言包安装

<b>Important</b> <b>重要</b>	The language package is only available for use with QIASymphony software version 4.1. 该语言包仅可结合 4.1 版的 QIASymphony 软件使用。
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Only the “Supervisor” role has the ability to upload the language package provided by QIAGEN. The language package can be installed on QIASymphony SP/AS using the USB stick or the QIAGEN Management Console (QMC).

仅 “QIASymphony” 身份可上传 QIAGEN 提供的语言包。该语言包可通过 USB 盘或 QIAGEN 管理控制台(QMC)安装到 QIASymphony SP/AS 上。

### 4.3.1 Setting up the USB stick and transferring language files from the USB stick 设置 USB 盘及从 USB 传输语言包文件

Add the `/data/translation` folder to the USB stick and copy the language package `*.tar.gz` file (e.g., `QIASymphony_SingleLanguagePackage_English-4.1.0.25_Release.tar.gz`) into the folder. 在 USB 盘内创建 `/data/translation` 文件夹，然后将语言包 `*.tar.gz` 文件（例如 `QIASymphony_SingleLanguagePackage_English-4.1.0.25_Release.tar.gz`）复制到该文件夹中。

1. Plug the USB stick with the language package into the USB port of the instrument.  
将装有语言包的 USB 盘插入到仪器的 USB 端口。
2. Login with “Supervisor” role.  
采用 “Supervisor” 身份登录。
3. Press **Tools**.  
点击 “**工具**”。
4. Press **File Transfer**.  
点击 “**文件传输**”。
5. Press the **Instr. Setup Files** tab.  
点击 “**仪器设置文件**” 选项卡。



6. Press **Language Packages**.

点击“语言包”。

7. Press **Transfer**.

<b>Important</b> <b>重要</b>	When selecting <b>Language Packages</b> , <b>Synchronize files</b> is not possible ( <b>No</b> is the default selection). 在选择“语言包”时，无法“同步文件”（默认选择为“否”）。
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#### 4.3.2 Transferring files using the QMC 使用 QMC 传输文件

The “Translation” file has been introduced for QIASymphony software version 4.1. Each “Translation” file represents a language package for one language.

4.1 版 QIASymphony 软件已植入“翻译”文件。每一份“翻译文件”代表一个对应一种语言的语言包。

“Translation” files can be transferred by the “Supervisor” role to the QIASymphony SP/AS using the file transfer tool of the QIASymphony Management Console (QMC) version 4.1 and are visible in the respective selections. “Translation” file(s) have to be located in the **root\data\translation** folder.

通过“Supervisor”身份，可采用 4.1 版 QIASymphony 管理控制台(QMC)的文件传输工具将“翻译”文件传输到 QIASymphony SP/AS 上，从而显示在相应的选项中。“翻译”文件必须放在 **root\data\translation** 文件夹下。

#### 4.3.3 Changing the language on QIASymphony SP/AS 更改 QIASymphony SP/AS 的语言

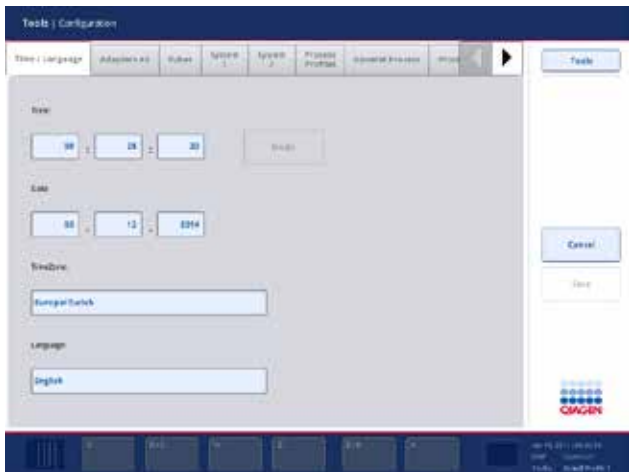
After the language package upload is complete, the “Supervisor” can configure the language of the user interface. The language change will take effect after the system is rebooted.  
语言包上传完毕后，“Supervisor”可配置用户界面的语言。系统重启后，语言更改生效。

To change the language, proceed as follows:

如要更改语言，可按如下步骤进行：

1. Log in with the “Supervisor” role.  
采用“Supervisor”身份登录。
2. Press the **Tools** tab.  
点击“工具”选项卡。
3. Press the **Configuration** button. The **Configuration** menu appears.  
点击“配置”按钮。随即出现“配置”菜单。

4. Select the **Time/Language** tab.  
选择“时间/语言”选项卡。



5. Select the **Language** field.  
选择“语言”字段。
6. Select an available language from the **Language** list.  
从“语言”列表中选择可选的语言。
7. Press the **Save + Reboot** button to save the changes.

The QIAsymphony SP/AS will restart.

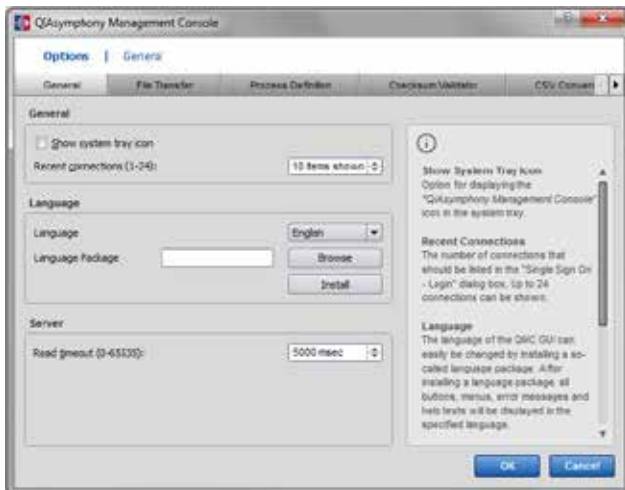
QIAsymphony SP/AS 随即重启。

#### 4.3.4 Changing the language in QIAsymphony Management Console (QMC) 更改 QIAsymphony 管理控制台(QMC)语言

To change the QMC language, complete the steps below.  
如要更改 QMC 语言，请完成以下步骤。

<b>Important</b> <b>重要</b>	<p>In Windows® 7, the QMC has to be in the “Run as Administrator” mode. To enter this mode, right-click on &lt;QMC Installation Directory&gt;\bin\qClient.exe and then select <b>Run as Administrator</b>.</p> <p>在 Windows® 7 下，QMC 必须处于“以管理员身份运行”模式。如需进入此模式，右键单击&lt;QMC Installation Directory&gt;\bin\qClient.exe 然后选择“以管理员身份运行”。</p>
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1. Select **Tools**.  
选择“工具”。
2. Select **Options**. The **Options** dialog box is displayed.  
选择“选项”。随即显示“选项”对话框。
3. Select the **General** tab. The corresponding parameters appear.  
选择“通用”选项卡。随即显示对应的参数。



4. Click **Browse**.  
点击“浏览”。
5. Navigate to the location of the downloaded language pack.  
导航至下载的语言包存放的路径下。

- 
6. Select the zipped language pack file.  
选择压缩的语言包文件。
  7. Click **Open**.  
点击“**打开**”。
  8. Click **Install**.  
点击“**安装**”。
  9. Select the language.  
选择语言。
  10. Click **OK**.  
点击“**OK**”。
  11. Close (**File** → **Exit**) and restart the QMC. → **退出**

# 5 QIASymphony SP/AS User Interface

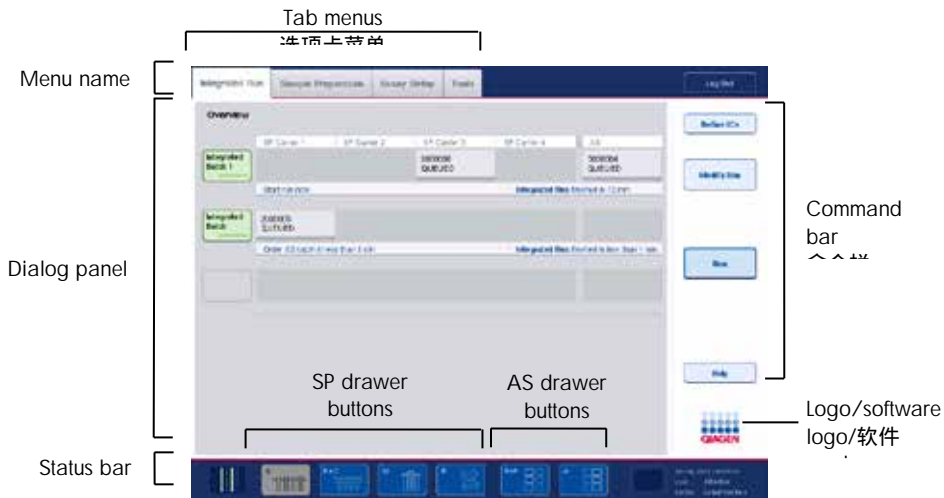
## QIASymphony SP/AS 用户界面

### 5.1 QIASymphony SP/AS screen layout

#### QIASymphony SP/AS 界面布局

This section gives a quick introduction of the user interface of QIASymphony SP/AS software menus. Descriptions of the tabs, tools, and buttons are listed in separate tables. 本节大致介绍 QIASymphony SP/AS 软件菜单的用户界面。有关各个选项卡、工具和按钮的说明将在单独的表格中列明。

For more detailed information, see Section 16. 如需更细致地了解相关信息，请参阅第 16 章。



#### 5.1.1 Status bar

##### 状态栏

##### 5.1.1.1 Batch status icon

###### 批次状态图标

The batch status icon provides the user with information about each sample batch. 批次状态图标为用户提供了有关各个样本批次的信息。





The color of each tube carrier denotes the status of the associated batch.

各个试管托架的颜色表明了相关批次的状态。

The way the batch status icon is displayed varies according to whether samples are loaded in a tube on the QIASymphony SP.



根据样本是否上样到 QIASymphony SP 上的试管内，批次状态图标会显示各异。

### 5.1.1.2 Drawer buttons



#### 抽屉按钮

If a QIASymphony AS module is installed, a button for each QIASymphony AS drawer appears in the status bar of the common SP/AS user interface adjacent to the QIASymphony SP drawer buttons.




如果安装了 QIASymphony AS 模块，则会在常用的 SP/AS 用户界面状态栏上临近 QIASymphony SP 抽屉按钮的位置，出现一个对应于各个 QIASymphony AS 抽屉的按钮。

	<p>Press the “S” button to open the <b>Sample Preparation/Define Sample Rack Type</b> screen.</p> <p>点击 “S” 按钮打开 “<b>样本制备/定义样本架类型</b>” 界面。</p> <p>If the “S” button is flashing, press the button so that the warning or error message can be displayed.</p> <p>如果 “S” 按钮闪烁，则点击该按钮以便显示警告或错误消息。</p> <p>The button for the <b>Sample</b> drawer is active if the <b>Batch Overview</b> or <b>Sample View</b> screen of the <b>Sample Preparation</b> menu is displayed.</p> <p>如果显示样本制备菜单的 “<b>查看批次</b>” 或 “<b>查看样本</b>” 界面样本界面，则 “<b>样本</b>” 抽屉的按钮激活，</p>
	<p>Press the “R+C” button to open the <b>Consumables/Cartridges/Filter-Tips</b> screen. When using the QIASymphony SP/AS, the screen is called <b>Consumables/Cartridges/Filter-Tips</b>.</p> <p>点击 “R+C” 按钮打开 “<b>耗材/试剂条/带滤芯吸头</b>” 界面。使用 QIASymphony SP/AS 时，该界面称为 “<b>耗材/试剂条/带滤芯吸头</b>”</p> <p>The button is active if the <b>Consumables/Cartridges/Filter-Tips</b> screen is</p>

	<p>displayed. This screen appears when the “R+C” button is pressed.          如果显示 “<b>耗材/试剂条/带滤芯吸头</b>” 界面，该按钮激活。点击 “R+C” 时即会出现此界面。</p> <p>If insufficient consumables and reagents are loaded for the queued batches, the “R+C” button becomes yellow and flashes. After opening the <b>Consumables/Cartridges/Filter-Tips</b> screen, the “R+C” button becomes gray again.</p> <p>如果为正在排队的批次载入的耗材和试剂不足，则 “R+C” 按钮会变为黄色并闪烁。打开 “<b>耗材/试剂条/带滤芯吸头</b>” 界面后，“R+C” 按钮变为灰色。</p>
	<p>Press the “W” button to open the <b>Waste</b> screen.          点击 “W” 按钮打开 “<b>废弃物</b>” 界面。</p> <p>The button for the <b>Waste</b> drawer is active when the <b>Waste</b> screen is displayed. This screen appears after the “W” button has been pressed.          显示 “<b>废弃物</b>” 界面时，“废弃物” 抽屉的按钮激活。按下 “W” 按钮后，随即显示此界面。</p> <p>If there is insufficient space in the <b>Waste</b> drawer for used 8-Rod Covers or sample prep cartridges, the “W” button becomes yellow and flashes. After opening the <b>Waste</b> screen, the button becomes gray again.          如果 8 位磁棒套 “废弃物” 抽屉或者样本制备卡夹的内的空间不足，则 “W” 按钮变为黄色并闪烁。打开 “废弃物” 界面后，按钮再次变为灰色。</p>
	<p>Press the “E” button to open the <b>Elution Slot/Configure Racks</b> screen.          点击 “E” 按钮以打开 “<b>洗脱槽/配置架</b>” 界面。</p> <p>The button for the <b>Eluate</b> drawer is active if either the <b>Sample Preparation/Elution Slot/Configure Racks</b> or the <b>Sample Preparation/Elution Slot</b> screen is displayed. One of these screens appears when the “E” button is pressed or if the <b>Eluate</b> drawer is opened.</p> <p>如果显示 “<b>样本制备/洗脱槽/配置架</b>” 或 “<b>样本制备/洗脱槽</b>” 界面，则 “<b>洗脱物</b>” 抽屉的按钮激活。按下 “E” 按钮时或打开 “洗脱物” 抽屉时，会显示这些界面。</p> <p><b>Note:</b> The “E” button becomes green and the arrow symbols flash if an elution rack is ready to be removed from the <b>Eluate</b> drawer.          注意：如果已经从 “<b>洗脱物</b>” 抽屉中移除洗脱架，则 “E” 按钮变为绿色，同时箭头符号闪烁。</p>

	<p>When an assay run has been defined, press the “E+R” button to open the <b>Loading Information</b> screen.</p> <p>定义检测反应体系后，点击“E+R”按钮以便打开“<b>载入信息</b>”界面。</p> <p>This button flashes yellow if there are insufficient adapters or rack positions available for the defined runs. In this situation, if you press the button, a message appears informing the user why it is not possible to start the run.</p> <p>如果定义的反应体系的接头或可用的托架位置不足，则此按钮变为黄色并闪烁。在此情况下，如果您点击此按钮，会出现一条消息，提示用户为何无法开始反应。</p>
	<p>When an assay run has finished, the “A” button flashes green. In this situation, if you press the button, a message appears informing the user that the run has been completed. Press <b>OK</b> to confirm the message.</p> <p>检测反应结束后，“A”按钮变为绿色并闪烁。在此情况下，会出现一条消息，提示用户该反应已完成。此时可点击“<b>OK</b>”确认消息内容。</p> <p>If there are insufficient assay racks available for the selected assays, this button flashes yellow. In this situation, if you press the button, a message appears informing the user why it is not possible to start the run.</p> <p>如果选定的检测可用的检测架不足，则此按钮变为黄色并闪烁。在此情况下，会出现一条消息，提示用户为何无法开始反应。</p>

### 5.1.2 Tab menus 选项卡菜单

 	<p>The <b>Integrated Run</b> tab is used to:</p> <p>“<b>集成运行</b>”选项卡可用于：</p> <p>Define integrated runs 定义集成运行</p> <p>View information about the status of defined integrated runs 浏览定义的集成运行的状态信息 (i.e., progress, batch status, estimated time remaining, and the next user interaction required for each integrated batch) (即，过程、批次状态、预计剩余的时间，以及各个集成批次所需的下一用户交互操作)</p>
	<p>The <b>Sample Preparation</b> tab is used for running protocols, to control the</p>

<p>样本制备</p>	<p>individual drawers, for logging in to the instrument, and for the Wizard.</p> <p>“<b>样本制备</b>”选项卡用于运行程序，控制单个的抽屉，从而用于仪器记录和向导。</p>
<p>Assay Setup</p> <p>检测构建</p>	<p>The <b>Assay Setup</b> tab is used to define independent runs on the QIASymphony AS. In this tab, the user can:</p> <p>“<b>检测构建</b>”选项卡用于在 QIASymphony AS 上定义单独的运行。通过此选项卡，用户可：</p> <p>Assign Assay Parameter Sets</p> <p>View information about the QIASymphony AS (including the progress and status of assay setup)</p> <p>Remove completed assays</p> <p>分配检测参数集</p> <p>浏览有关 QIASymphony AS 的信息（包括检测构建进程和状态）</p> <p>移除已完成的检测</p>
<p>Tools</p> <p>工具</p>	<p>The <b>Tools</b> tab provides access to several menus required for operation of QIASymphony SP/AS instruments.</p> <p>通过“<b>工具</b>”选项卡可以访问操作 QIASymphony SP/AS 仪器所需的若干菜单。</p>


<p><b>Important</b></p> <p><b>重要</b></p>	<p>A protocol is a set of instructions that allows the QIASymphony SP to perform a molecular biology application. The handbook supplied with your QIASymphony Kit will tell you which protocol you should use.</p> <p>程序是一套指令集，支持 QIASymphony SP 执行特定的分子生物学应用。QIASymphony Kit 随附的手册中会介绍您应采用的程序。</p>
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## 5.2 Software symbols

### 软件图标

During operation of QIASymphony SP/AS instruments, messages may appear that provide the user with general information, inform the user that operator input is required, or provide information about warnings and errors. Each type of message contains a symbol for easy identification by the user.

在操作 QIASymphony SP/AS 仪器时，会出现相应的消息，告知用户一般的信息，通知用户需要进行操作员输入，或提示警告和错误信息。各种类型的消息均含有一个便于用户区分的图标。

	This symbol is displayed if the message contains information about an error. 如果错误消息中含有错误，则显示此符号。
	This symbol is displayed in warning messages. 此符号显示在警告消息中。
	This symbol is displayed if input by the user is required. 如果需要用户输入，则会显示此符号。
	This symbol is displayed if the message provides the user with information. 如果消息中包含需要用户注意的信息，则会显示此符号。

## 6 Handling Files

### 文件操作

This section describes how users with the “Operator” user ID can upload and download files.

本节介绍具有“Operator”用户ID的用户如何上传和下载文件

For detailed information about file handling, refer to Section 8, “Handling Files”, of the *QIASymphony SP/AS User Manual — General Description*. 有关文件操作的详细信息，请参阅“QIASymphony SP/AS 用户手册 — 概述”第8章“文件操作”。

#### 6.1 Transfer options

##### 传输选项

When you are logged in as “Operator” you will be able to transfer the following file types:  
以“Operator”身份登录后，可以传输以下类型的文件：

**From QIASymphony SP/AS instruments to USB stick (downloading)**  
**从 QIASymphony SP/AS 仪器向 USB 盘传输 (下载)**

Log files

Result file SP

Result file AS

Confirmation files

Loading information files

Cycler files

Instrument report files

Rack files

Work lists

日志文件

结果文件 SP

结果文件 AS

确认文件

载入信息文件

PCR 仪文件

仪器报告文件

托架文件

任务列表

*From USB stick to QIASymphony SP/AS instruments (uploading)*

**从 USB 盘向 QIASymphony SP/AS 仪器 (上传)**

Rack files

Work lists

Concentration data files

管架文件

任务列表

浓度数据文件

*Synchronization of file types between QIASymphony SP/AS and USB stick*

**在 QIASymphony SP/AS 和 USB 盘之间同步文件类型**

Rack files

Work lists

Concentration data files

托架文件

任务列表

浓度数据文件

Files can be handled directly using a USB stick or, alternatively, using the **File Transfer** tool in the QIASymphony Management Console. Result files, work list files, loading information files, cyclor files, and log files can also be handled using the **Automatic File Transfer** tool.

这些文件可直接使用 USB 盘或使用 QIASymphony 管理控制台中的“文件传输”工具操作。结果文件、工作列表文件、装载信息文件、扩增文件和日志文件也可通过“自动文件传输”工具进行操作。

For more information about both tools, refer to the *QIASymphony Management Console User Manual*. If the **Automatic File Transfer** tool is used, the user with the “Supervisor” user ID must assign a password to the **File Transfer** user. Refer to the *QIASymphony Management Console User Manual* for information about how to do this.

有关这两种工具的更多信息，请参考 QIASymphony 管理控制台用户手册。如果使用“自动文件传输”工具，有“Supervisor”ID 的用户必须给“文件传输”用户设定密码。相关操作方法细节请参阅 QIASymphony 管理控制台用户手册。

For detailed information about QIASymphony SP/AS file types, refer to Section 8.1 of the *QIASymphony SP/AS User Manual — General Description*.

有关 QIASymphony SP/AS 文件类型的详细信息，请参阅“QIASymphony SP/AS 用户手册 — 概述”第 8.1 节。

## 6.2 Data transfer via the USB stick 通过 USB 盘传输数据

<b>Important</b> <b>重要</b>	<p>If you are using the QIASymphony Management Console to synchronize your data, the file/folder structure of the USB stick is set up automatically.</p> <p>若您正在使用 QIASymphony 管理控制台同步您的数据，将自动创建 USB 盘的文件/文件夹结构。</p> <p>The file/folder structure is displayed in Section 8.3.1 of the <i>QIASymphony SP/AS User Manual — General Description</i>.</p> <p>文件/文件夹结构请见“QIASymphony SP/AS 用户手册 — 概述”第 8.3.1 节。</p>
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<b>Important</b> <b>重要</b>	<p>The QIAGEN USB stick should only be used for QIASymphony SP/AS data transfer. Make sure that the file/folder structure of the USB stick is correct and that enough storage space is available.</p> <p>QIAGEN 的 USB 盘仅可用于 QIASymphony SP/AS 数据传输。仅请确保 USB 盘的文件/文件夹结构正确无误，且有足够的可用存储空间。</p>
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<b>Important</b> <b>重要</b>	<p>Do not remove the USB stick during data transfer.</p> <p>请勿在文件传输期间移除 USB 盘。</p>
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## 6.3 File transfer from QIASymphony instruments to the USB stick 从 QIASymphony 仪器传输文件至 USB 盘

To store data generated by QIASymphony SP/AS instruments, you can transfer files to the USB stick if the QIASymphony Management Console is not available.



需要保存 QIASymphony SP/AS 仪器生成的数据时，如果 QIASymphony 管理控制台不可用，可将文件传输至 USB 盘。

If the QIASymphony SP/AS instruments are not connected to the network, this function can also be used to supply the **Process Definition** editor tool of the QIASymphony Management Console with the data required to create new Assay Control Sets and Assay Parameter Sets.

QIASymphony SP/AS 仪器未联网时，也可使用此项功能，支持创建新检测对照集和检测参数集所需数据的 QIASymphony 管理控制台的“**处理定义**”编辑工具。

If you are using the QIASymphony Management Console, refer to the *QIASymphony Management Console User Manual* for more information.

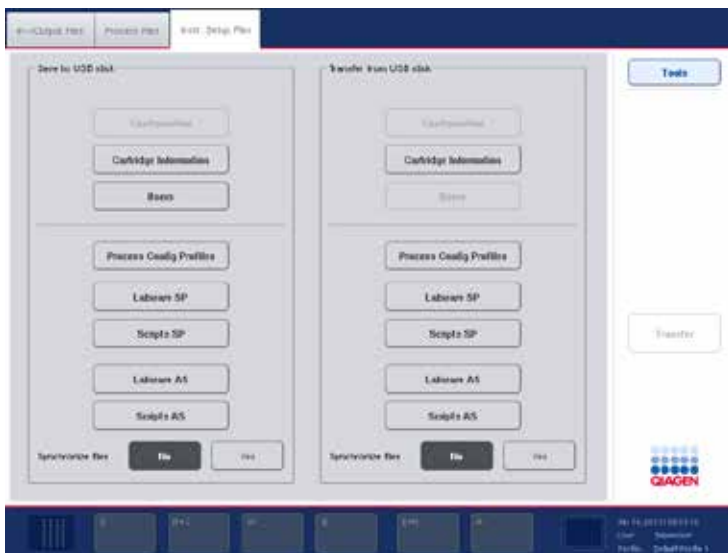
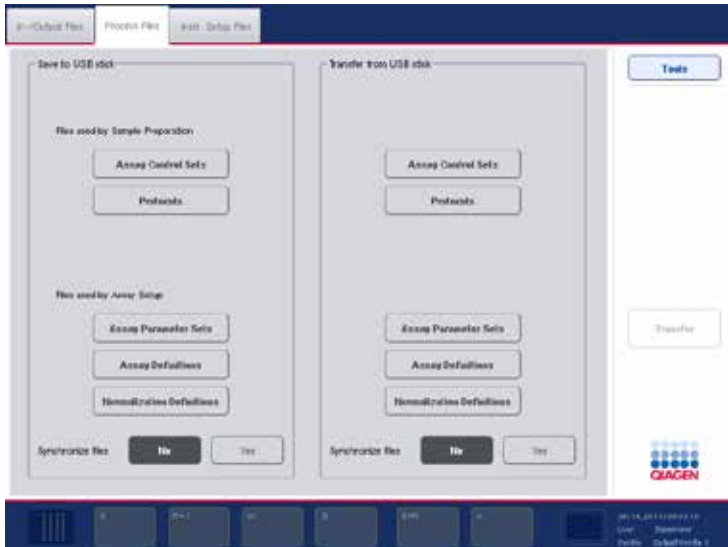
如果您正在使用 QIASymphony 管理控制台，请参照 QIASymphony 管理控制台用户手册获取更多信息。

To transfer files from QIASymphony SP/AS instruments to the USB stick, follow the steps below. 要从 USB 盘传输文件至 QIASymphony SP/AS 仪器，请遵循以下步骤。

1. Log in to the QIASymphony SP/AS instruments.  
登录 QIASymphony SP/AS 仪器。
2. Insert the USB stick into one of the USB ports at the front of the QIASymphony SP.  
在 QIASymphony SP 前部的其中一个 USB 接口内插入 USB 盘。
3. Press **File Transfer** in the **Tools** screen. The **In-/Output Files** tab of the **File Transfer** menu opens.  
点击“**工具**”界面中的“**文件传输**”。“**文件传输**”菜单的“输入/输出文件”选项卡打开。



4. Select one of the file transfer tabs (In-/Output Files, Process Files, Instr. Setup Files).  
选择其中一个文件传输选项卡（输入/输出文件、处理文件、仪器设置文件。）



5. Select the file type(s) to be downloaded to the USB stick by pressing the appropriate button in the **Save to USB stick** panel.

通过“保存至 USB 盘”面板的相应按钮选择下载至 USB 盘的文件类型。

6. Press the **Transfer** button in the command bar of the screen to transfer the selected files to the USB stick.

点击界面命令栏中的“传输”按钮，传输选定文件至 USB 盘。

A message appears informing you that the files will be transferred from the QIAsymphony SP/AS instruments to the USB stick.

出现一条消息，提示您文件将从 QIAsymphony SP/AS 仪器传输至 USB 盘。

7. Press **Yes** to confirm that the files should be transferred.

点击“是”确认文件传输。

During data transfer, an information message will be displayed.

在数据传输过程中，将会显示信息消息。

After successful data transfer, a message will appear confirming data transfer.

成功传输数据后，将会显示一条确认数据传输的信息。

8. Remove the USB stick.

## 6.4 Transferring files from the USB stick 从 USB 盘传输文件

<b>Important</b> <b>重要</b>	File transfer of both QIASymphony SP and QIASymphony AS files is performed using the <b>File Transfer</b> menu. 通过“ <b>文件传输</b> ”菜单进行 QIASymphony SP 和 QIASymphony AS 文件传输。
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You can transfer files from the QIASymphony Management Console to QIASymphony SP/AS instruments. Alternatively, if you are not connected to the network, you can transfer files using the USB stick.

您可以从 QIASymphony 管理控制台传输文件至 QIASymphony SP/AS 仪器。如果您未联网，还可以传输文件至 USB 盘。

To transfer files from the USB stick to QIASymphony SP/AS instruments, follow the steps below.

要从 USB 盘传输文件至 QIASymphony SP/AS 仪器，请遵循以下步骤：

1. Copy the files to be uploaded to the corresponding directory on the USB stick.  
拷贝待上传文件至 USB 盘的相应目录中。
2. Log in to the QIASymphony SP/AS instruments.  
登陆到 QIASymphony SP/AS 仪器
3. Insert the USB stick into one of the USB ports at the front of the QIASymphony SP.  
插入 USB 盘至 QIASymphony SP 前部的其中一个 USB 接口。
4. Press **File Transfer** in the **Tools** screen to enter the **In-/Output Files** tab.  
点击“**工具**”界面中的“**文件传输**”进入“**输入/输出文件**”标签。
5. Select one of the file transfer tabs (**In-/Output Files**, **Process Files**, **Instr. Setup Files**).  
选择其中一个文件传输标签（“**输入/输出文件**”、“**处理文件**”及“**仪器设置文件**”）。
6. Select the file type(s) to be uploaded to the QIASymphony SP/AS instruments by pressing the appropriate button(s) in the **Transfer from USB stick** panel.

通过点击“从 USB 盘传输”面板中的相应按钮，选择待上传至 QIAsymphony SP/AS 仪器的文件类型。

When the first file type has been selected, the **Transfer** button becomes active.

当选定了首个文件类型后，“传输”按钮变为活动状态。

7. Press the **Transfer** button to transfer all selected file types from the USB stick to the QIAsymphony SP/AS instruments.

点击“**传输**”按钮传输 USB 盘中的所有选定文件类型至 QIAsymphony SP/AS 仪器。

A message appears informing you that the files will be transferred from the USB stick to the QIAsymphony SP/AS instruments.

随即出现一条消息，提示您文件将从 USB 盘传输至 QIAsymphony SP/AS 仪器。

8. Press **Yes** to confirm that the files should be transferred.

点击“是”确认文件传输。

During data transfer, an information message will be displayed.

在数据传输过程中，将会显示信息消息。

After successful data transfer, a message will appear confirming the data transfer.

成功传输数据后，将会显示一条确认数据传输的信息。

9. Remove the USB stick. 移除 USB 盘。

<b>Important</b> <b>重要</b>	You can select more than one file type at once. 您可以一次选择一个以上的文件类型。
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<b>Important</b> <b>重要</b>	Make sure that <b>Synchronize files</b> is set to <b>No</b> . 确保“同步文件”设为“否”。
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## 6.5 Synchronizing files 同步文件

Files stored on QIAsymphony SP/AS instruments can be synchronized with files on the USB stick.  
保存在 QIAsymphony SP/AS 仪器上的文件可与 USB 盘上的文件保持同步。

If the file already exists on the QIAsymphony SP/AS it will be overwritten.

如果 QIAsymphony SP/AS 上已存在此文件，则其将被覆盖。

Files that exist on QIAsymphony SP/AS instruments but do not exist on the USB stick are deleted from QIAsymphony SP/AS instruments.

QIAsymphony SP/AS 仪器上存在但 USB 盘中不存在的文件，将会被从 QIAsymphony SP/AS 仪器删除。

After synchronization, the content of files of the same type that are stored on QIAsymphony SP/AS instruments and the USB stick is identical.

同步后，QIAsymphony SP/AS 仪器上和 USB 盘上保存的相同类型的文件内容是相同的

### 6.5.1 Synchronizing files on instruments with files on the USB stick

#### 同步仪器上和 USB 盘上的文件

To synchronize files on QIAsymphony SP/AS instruments with files on the USB stick, follow the steps below.

同步仪器上和 USB 盘上的文件时，请遵循以下步骤：

1. Log in to the QIAsymphony SP/AS instruments.

登录 QIAsymphony SP/AS 仪器。

Prepare the USB stick with the files for synchronization. Store the files you want to upload to the QIAsymphony SP/AS instruments in their corresponding folders on the USB stick (e.g., a newly defined rack file in the folder **/data/Worklists/**).

准备好存有同步文件的 USB 盘。保存您想上传至 QIAsymphony SP/AS 仪器的文件到 USB 盘上的对应文件夹（如，文件夹 **/data/Worklists/** 中的新定义架文件）。

2. Insert the USB stick into one of the USB ports at the front of the QIAsymphony SP.

插入 USB 盘至 QIAsymphony SP 前部的其中一个 USB 接口。

3. Press **File Transfer** in the **Tools** screen to enter the **In-/Output Files** menu.

点击“**工具**”界面中的“**文件传输**”进入“**输入/输出文件**”菜单。

4. Select one of the file transfer tabs (**In-/Output Files**, **Process Files**, **Instr. Setup Files**).

For example, to synchronize work lists, select the **In-/Output Files** tab.

选择其中一个文件传输标签（“**输入/输出文件**”、“**处理文件**”及“**仪器设置文件**”）。例如，要同步工作列表，可选择“**输入/输出文件**”标签。

5. Select the file type(s) on the QIAsymphony SP/AS instruments that should be synchronized with the files on the USB stick by pressing the appropriate button(s) in the **Transfer from USB stick** panel.

通过点击“**从 USB 盘传输**”面板中的相应按钮，选择 QIAsymphony SP/AS 仪器上应当与 USB 盘上文件同步的文件。

6. Set **Synchronize files** to **Yes** by pressing the **Yes** button.

点击“**是**”按钮将“**同步文件**”设为“**是**”。

7. Press the **Transfer** button in the command bar of the screen to synchronize the selected files type(s).

点击屏幕命令栏中的“**传输**”按钮，同步选中的文件类型。

A message appears informing you that the files will be synchronized. Check that the information is correct.

随即出现一条消息，提示您这些文件将要被同步化。请核对该信息内容是否正确。

8. To continue with the synchronization, press **Yes**.

如要继续同步，点击“是”。

After successful synchronization, a message will appear confirming synchronization.

成功同步之后，随即出现一条消息，提示确认同步。

9. Press **OK** to continue.

点击“OK”继续。

10. Remove the USB stick.

### 6.5.2 Synchronizing files on the USB stick with files on instruments

#### 同步 USB 盘和仪器上的文件

Files on the USB stick can be synchronized with files on the QIASymphony SP/AS.

USB 盘上的文件可与 QIASymphony SP/AS 上的文件同步。

This means that files stored on the QIASymphony SP/AS are transferred to the USB stick.

这就表示，在 QIASymphony SP/AS 上存储的文件可以传输到 USB 盘上。

If the file already exists on the USB stick it will be overwritten by the file from the QIASymphony SP/AS instruments.

USB 和 QIASymphony SP/AS 上均存在的文件，会被 QIASymphony SP/AS 上的文件覆盖。

Files that exist on the USB stick but do not exist on the QIASymphony SP/AS instruments are deleted from the USB stick.

USB 盘上存在但 QIASymphony SP/AS 上没有的文件，则会从 USB 盘上删除掉。

To synchronize files on a USB stick with files on the QIASymphony SP/AS, follow the steps below.

如要用 QIASymphony SP/AS 上的文件同步 USB 盘上的文件，请遵照以下步骤进行。

1. Log in to the instrument with the “Supervisor” user ID.  
采用“Supervisor”用户 ID 登录仪器。
2. Prepare the USB stick for synchronization. Insert the USB stick into one of the USB ports at the front of the QIASymphony SP.  
准备需要同步化的 USB 盘。插入 USB 盘至 QIASymphony SP 前部的其中一个 USB 接口。
3. Press **File Transfer** in the **Tools** screen to enter the **In-/Output Files** tab menu.  
点击“工具”界面中的“文件传输”进入“输入/输出文件”菜单。

4. Select one of the file transfer tabs (**In-Output Files**, **Process Files**, **Instr. Setup Files**).  
选择其中一个文件传输标签（“**输入/输出文件**”、“**处理文件**”及“**仪器设置文件**”）。
5. Select the file type(s) that should be synchronized by pressing the appropriate button(s) in the **Save to USB stick** panel.  
点击“**保存到 USB 盘**”面板上的对应按钮，选择要同步的文件类型。。
6. Set **Synchronize files** to **Yes** by pressing the **Yes** button.  
点击“**是**”按钮将“**同步化文件**”设为“**是**”。
7. Press the **Transfer** button in the command bar of the screen to synchronize the selected files.  
点击屏幕命令栏中的“**传输**”按钮，同步化选中的文件类型。  
  
A message appears informing you that the files will be synchronized. Check that the information is correct.  
随即出现一条消息，告知您文件将进行同步。请核对信息是否正确。
8. To continue with the synchronization, press **Yes**.  
要继续同步化，请点击“**是**”。  
  
After successful synchronization, a message will appear confirming synchronization.  
成功同步化后，随即出现一条确认同步化的信息。
9. Remove the USB stick. 移除 USB 盘。

## 6.6 Deleting files 删除文件

Different tools can be used to delete files from QIASymphony SP/AS instruments. We recommend using the **File Transfer** tool of the QIASymphony Management Console. 可使用不同的工具从 QIASymphony SP/AS 仪器删除文件。我们建议使用 QIASymphony 管理控制台的“**文件传输**”工具。

If the QIASymphony SP/AS is not connected to the network, there is a method for deleting all input and output files, except log files, and a method for deleting all other files. 如果 QIASymphony SP/AS 未联网，有一种可以删除除日志文件外的所有输入和输出文件，及删除所有其他文件的方法。

For detailed information about deleting files, refer to Section 8.5 of the *QIASymphony SP/AS User Manual — General Description*.

有关如何删除文件的详细信息，请参阅“QIASymphony SP/AS 用户手册 – 概述”第 8.5 节。



## 7 QIASymphony SP Features

### QIASymphony SP 功能

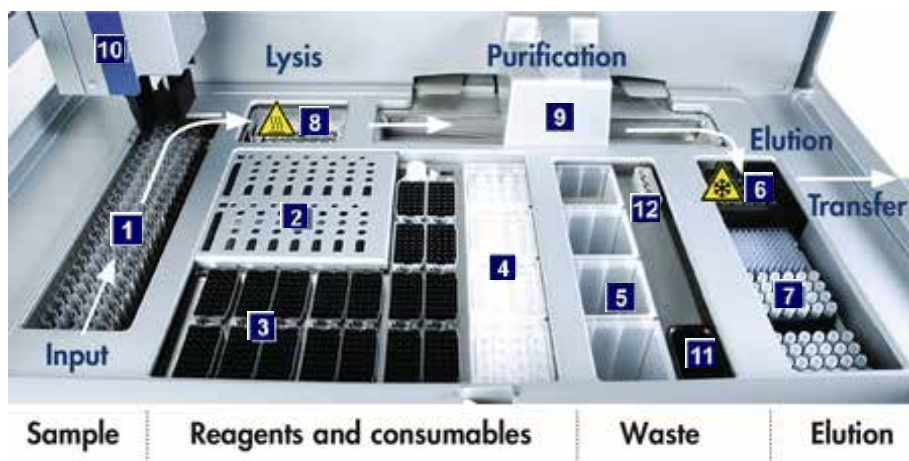
The section describes how to operate the QIASymphony SP instrument, including how to load and unload the worktable.

本章介绍如何操作 QIASymphony 仪器，包括如何加载及卸载工作台。

The QIASymphony SP performs fully automated purification of nucleic acids using magnetic-particle technology. Samples can be processed in batches of up to 24 samples. The instrument controls integrated components including a lysis station, 4-channel pipetting system, robotic gripper, and an array of magnetic rods that are protected by rod covers. These rods can pick up or release magnetic particles in the wells of a sample prep cartridge, depending on whether the magnetic rods are inserted in the rod covers or not. QIASymphony SP 采用磁珠技术实现核酸或蛋白的全自动纯化。每批可处理多至 24 个样本。本仪器控制的整合组件包括：裂解台、4 通道移液系统、机械手夹持器，及用磁棒套保护的磁棒阵列。根据磁棒是否插入到磁棒套内，这些磁棒可吸附或释放磁珠到样本制备卡夹的孔内。

The QIASymphony SP is preinstalled with various protocols and corresponding Assay Control Sets for purification of RNA, genomic DNA, and viral and bacterial nucleic acids. The user loads reagents (in prefilled, sealed reagent cartridges) and consumables into the appropriate drawer, loads the samples, and selects a protocol using the touchscreen. The user then starts the protocol, which provides all necessary commands for sample lysis and purification. A fully automated inventory scan (either after closing the individual drawers or before the run starts) helps to ensure that the QIASymphony SP is correctly set up for the protocol. QIASymphony SP 预装了各种用于纯化 RNA、基因组 DNA 及病毒和细菌核酸的程序和对应的检测对照集。用户需在相应的抽屉内加载试剂（预装在密封的试剂条中）和耗材，载入样本，并通过触摸屏选择程序。之后，用户可启动相应的程序——此类程序包含样本裂解和纯化所需的所有指令。完全自动化的库存扫描过程（在闭合单独的抽屉后或运行开始前进行）可确保 QIASymphony SP 正确设置程序。

## 7.1 Workflow principle 工作原理



- |                                    |  |                                     |
|------------------------------------|--|-------------------------------------|
| <b>1</b> Sample input<br>样本输入      | <b>5</b> Waste compartment<br>废弃物舱                 | <b>9</b> Magnetic head<br>磁头        |
| <b>2</b> Reagent cartridges<br>试剂条 | <b>6</b> "Elution slot 1" (cooled)<br>“洗脱槽 1” (冷却) | <b>10</b> Robotic arm<br>机械臂        |
| <b>3</b> Filter-tips<br>滤器吸头       | <b>7</b> "Elution slots 2-4"<br>“洗脱槽 2-4”          | <b>11</b> Tip waste chute<br>吸头废弃物槽 |
| <b>4</b> Consumables<br>耗材         | <b>8</b> Lysis station (heated)<br>裂解台 (加热)        | Tip park station<br>吸头静置台           |

### 7.1.1 Basic principle 基本原理

Sample preparation using the QIASymphony SP usually consists of 4 main steps: lyse, bind, wash, and elute.

使用 QIASymphony SP 制备样本通常包括 4 个主要步骤：裂解，结合，清洗，洗脱。

Samples are lysed in the lysis station, which can be heated, if required by the protocol.

在裂解台裂解样本，若程序要求还可对其进行热处理。

Nucleic acids bind to the surface of the magnetic particles and are washed to remove contaminants.

核酸或蛋白与磁珠表面结合，并被清洗去除污染物。

Purified nucleic acid is eluted.

洗脱纯化后的核酸或蛋白。

The QIASymphony SP processes a sample containing magnetic particles as follows:

QIASymphony SP 按如下方式处理含磁珠的样本：

A magnetic rod protected by a rod cover enters a well containing the sample and attracts the magnetic particles.

带磁棒套保护的磁棒进入含有样本的孔内，吸附磁珠。

Sample prep cartridges are positioned below the magnetic rod with its cover.

样本制备卡夹位于带磁棒套磁棒的下方。

The QIASymphony SP uses a magnetic head containing an array of 24 magnetic rods, and can therefore process 24 samples simultaneously. Steps 1 and 2 are repeated several times during sample processing.

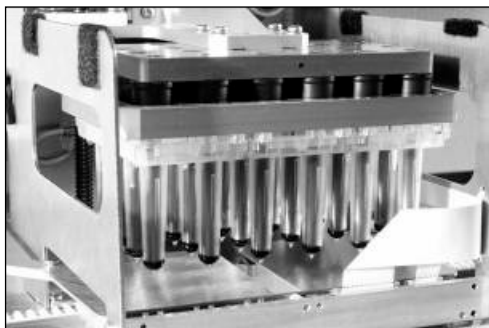
QIASymphony SP 采用含 24 个磁棒阵列的磁头，因此可同时处理 24 个样本。在样本处理过程中将重复步骤 1 和步骤 2 若干次。

## 7.2 Instrument features 仪器特性

### 7.2.1 Magnetic head 磁头

The magnetic head is comprised of an array of 24 magnetic rods for processing magnetic particles, a conveyor, and magnetic-head guards.

磁头组成包括：用来处理磁珠的 24 个磁棒阵列，传送装置，及磁头防护装置



Magnetic head of the QIASymphony SP.  
QIASymphony SP 的磁头。

The magnetic head comprises a rod-cover drive for mixing samples and a magnetic-rod drive for separation and resuspension of magnetic particles. The conveyor moves the sample prep cartridges from the start position to the processing position and, finally, to the output position. The magnetic-head guards move underneath the magnetic head and help to prevent contamination of the worktable or samples by any liquid that may drip from the rod covers. 磁头是由驱动混匀样本的磁棒套和驱动分离和重悬磁珠的磁棒组成。传送装置从起始位移动样本

制备卡夹至处理位，最后至输出位。磁头防护装置移至磁头下方，有助于防止由磁棒套可能滴下的液体所致的工作台或样本污染。

<b>Important</b> <b>重要</b>	<b>Important:</b> To prevent liquid from entering the QIASymphony SP, only operate the instrument with the magnetic-head guard installed. <b>重要：</b> 为防止液体进入 QIASymphony SP，只有安装了磁头防护装置才可以运行仪器。
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### 7.2.2 Lysis station 裂解台

The lysis station, a heated orbital shaker, enables automated lysis of up to 24 samples in 1 batch. After sample lysis, the lysis station moves upward so that samples can be transferred for further processing.

裂解台、加热轨道振荡器支持至多 1 批 24 个样本的自动裂解。样本裂解后，裂解台上移，这样样本可被移出进行进一步的处理。



QIASymphony SP lysis station.  
QIASymphony SP 裂解台。

### 7.2.3 Robotic arm 机械臂

The robotic arm provides accurate and precise positioning of the robotic gripper and pipettor head. The robotic arm also includes an optical sensor, a 2D bar code camera, and a UV lamp. 机械臂实现机械手夹持器和移液器头的精准定位。机械臂还包括一个光学传感器、一个二维条形码照相机和一个 UV 灯。

### 7.2.3.1 Robotic gripper 机械手夹持器

The robotic gripper transfers consumables (8-Rod Covers and sample prep cartridges) to the required position on the worktable during sample preparation.

机械手夹持器在样本制备过程中将耗材（8 位磁棒套和样本制备卡夹卡夹）移至工作台上要求的位置。

### 7.2.3.2 Pipettor head 移液器头

The pipettor head is mounted on the robotic arm and moves in the X, Y, and Z directions in order to reach different locations on the worktable.  
移液器头安装在机械臂上，并在 X、Y 和 Z 方向上移动，从而可到达工作台上的不同位置。

The pipettor head contains 4 pipetting channels with high-precision syringe pumps that are connected to tip adapters. The tip adapters can be attached to disposable filter-tips. The syringe pumps can operate simultaneously to allow aspiration and dispensing of small volumes of liquid (20–1500  $\mu\text{l}$ , application- and liquid-dependent) via the attached disposable filter-tips.  
移液器头包括 4 个配备有与吸头适配器相连的高精度注射泵的移液通道。吸头适配器填充一次性带滤芯吸头。注射泵通过连着的一次性带滤芯吸头可吸取和注射少量液体（20 – 1500  $\mu\text{l}$ ）。

Each pipetting channel can perform two types of liquid-level detection: capacitive-based liquid-level detection (cLLD) and pressure-based liquid-level detection (pLLD). To detect the liquid level, changes in capacitance or pressure between the disposable filter-tip and the liquid are measured.  
每种移液通道均可进行两种类型的液位检测：基于电容的液位检测（cLLD）和基于压力的液位检测（pLLD）。检测液位时，需测量一次性带滤芯吸头和液体之间的电容差或压力差。

### 7.2.3.3 Tip guards 吸头防护装置

Each pipettor head is equipped with 4 tip guards. During a run, the tip guards are positioned below the disposable tips to catch any drops of liquid that may fall. This helps to minimize the risk of cross-contamination.  
每个移液器头均备有 4 个吸头防护装置。在运行过程中，吸头防护装置就位于一次性吸头的下方以接住可能滴落的任何液滴。这有助于将交叉污染的风险降至最低。



Tip guards help to prevent cross-contamination.  
吸头防护装置有助于预防交叉污染。

#### 7.2.3.4 Optical sensor 光学传感器

During an inventory scan, the optical sensor checks that the consumables are correctly loaded in the drawers and that there are sufficient consumables loaded for the run. 库存扫描过程中，光学传感器将检查耗材是否正确装载到抽屉中，并检查运行是否装载了充足的耗材。

#### 7.2.3.5 UV lamp UV 灯

A UV lamp is mounted on the robotic arm and is used to decontaminate the worktable of the respective instrument. See Section 14.6 for information about operating the UV lamp. UV 灯安置在机械臂上，用于净化各单独仪器的工作台。请参阅第 14.6 节获取有关 UV 灯操作方法的信息。

### 7.3 Bar code reader 条形码阅读器

#### 7.3.1 Sample input bar code reader 样本输入条形码阅读器

The QIAsymphony SP has an integrated bar code reader that can read bar codes on tube carriers and sample tubes. A default tube type must be defined for each type of insert used. The tube type is automatically assigned when the insert bar code is read.

QIAsymphony SP 具有集成的条形码阅读器，可以读取试管托架和样本试管上的条形码。必须针对每次插入的试管，定义默认的试管类型。读取插入试管的条形码后，会自动分配试管类型。

Primary tubes can be labeled with bar codes.

主要的试管上可标上条形码。

The integrated bar code reader of the “Sample” drawer scans:

“样本”抽屉的条形码阅读器可扫描：

The position bar codes of the tube carriers.

试管托架的位置条形码。

The bar code labels on sample tubes.

样本试管上的条形码标签。

Each slot in a tube carrier has a bar code at the back of the slot. If the position is empty, the bar code at the back of the slot can be read by the bar code reader. This enables the QIASymphony SP to detect which positions in the tube carrier contain a tube and which are empty. 试管托架内的每个槽在其背侧均带有一个条形码。如果位置为空，槽背侧的条形码可被条形码阅读器读取。这使 QIASymphony SP 可检测到试管托架中的试管位和空位。

If you are using sample tubes that are not labeled with bar codes, tubes containing small volumes of liquid or clear liquids may not be detected. In this case, use a blank bar code label to enable detection of the sample tube. For more information, refer to the *QIASymphony SP/AS User Manual — General Description*. 如果您在使用的试管未带条形码标签，则含液量较小或含清亮液体的试管可能不被检测得到。在这种情况下，请使用空白条形码标签以使样本试管可检测。如需了解更多信息，请参阅“QIASymphony SP/AS 用户手册 – 概述”。

The scanned sample ID lists can be manually corrected and assigned into batches based on existing sample information or following user input. For more information, refer to the *QIASymphony SP/AS User Manual — General Description*.

可手动修改扫描到的样本 ID，并根据现有的样本信息或按照用户输入将其分配到批。如需了解更多信息，请参阅“QIASymphony SP/AS 用户手册 – 概述”。

Four tube carriers are available for use with sample tubes. In some protocols, samples may also be processed with positive or negative controls. A fifth tube carrier accommodates tubes containing internal controls that will be added to the samples. 4 种试管托架可与样本试管一起使用。在某些程序中，样本还可用阳性和阴性对照进行处理。第 5 个试管托架用于装载包含内参的试管，内参将被加到样本中。

### 7.3.2 Reagents and consumables 2D bar code reader 试剂和耗材 2D 条形码阅读器

As part of the inventory scan of the “Reagents and Consumables” drawer, the 2D bar code camera on the QIASymphony SP identifies the different reagents in the reagent cartridge and also checks that the correct reagent cartridge has been loaded. The 2D bar code reader is attached to the robotic arm.

作为对“试剂和耗材”库存扫描的一部分，QIASymphony SP 上的二维条形码照相机识别试剂条中的不同试剂，还检查是否已装载了正确的试剂条。二维条形码阅读器安装在机械臂上。

### 7.3.3 Bar code types 条形码类型

The handheld scanner and the **Sample Input** bar code reader can read bar codes of the following types:

手持式扫描器及样本输入条形码阅读器可以读取以下类型的条形码：

Code 39

Code 128 and subtypes

Codabar

Code39 码

Code128 码及其子类型

Codabar 码

<b>Important</b> <b>重要</b>	Do not use the bar code Interleaved 2 of 5. This bar code type has a high information density and no checksum. It can therefore generate errors. 请勿采用 2、5 交叉码。此种条形码类型具有高信息密度且无校验和。因此其有可能造成错误。
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For information about attaching 1D bar code labels to tubes, refer to Appendix A of the *QIASymphony SP/AS User Manual — General Description*.

有关在试管上贴一维条形码标签的信息请参阅“QIASymphony SP/AS 用户手册 – 概述”附录 A。

### 7.3.4 Handheld scanner 手持式扫描仪

The handheld scanner may be connected via USB connection to one of the USB ports of the QIASymphony SP/AS instruments. When using the QIASymphony Cabinet SP/AS, the handheld



scanner is delivered with a magnetic holder. The magnetic holder can only be fixed to the metallic parts of the cabinet.

手持式条形码扫描仪通过位于 QIASymphony SP 仪器底部右侧的 USB 接口与其相连。使用 QIASymphony 柜式 SP/AS 时，手持式扫描仪随附磁力基座。磁力基座仅可固定到柜上的金属部件上。



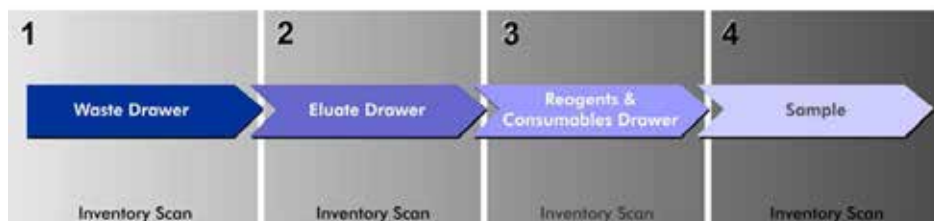
Handheld scanner.  
手持式扫描仪。

<b>Important</b> <b>重要</b>	To enable easy use of the bar code scanner, we recommend positioning the magnetic holder on the middle metallic panel. 为方便使用条形码扫描仪，我们建议将磁力基座固定在中部的金属面板上。
<b>Important</b> <b>重要</b>	For safe operation, hang the handheld scanner in its holder after use. 为确保操作安全，使用后请将手持式扫描仪放在基座内。

## 8 Loading QIASymphony SP Drawers 加载 QIASymphony SP 抽屉

This section describes how to load and unload the worktable and how to perform inventory scans to operate the QIASymphony SP instrument.

本章介绍如何加载和卸载工作台，以及如何进行库存扫描，从而操作 QIASymphony SP 仪器。



Workflow loading of QIASymphony drawers.  
QIASymphony 抽屉加载工作流程。

We recommend loading the drawers in the order:

我们建议按照如下顺序加载抽屉：

1. “Waste” drawer  
“废弃物”抽屉
2. “Eluate” drawer  
“洗脱物”抽屉
3. “Reagents and Consumables” drawer  
“试剂和耗材”抽屉
4. “Sample” drawer

### 8.1 Using the software Wizard 使用软件向导



The QIASymphony SP operating software offers a **Wizard** that provides step-by-step guidance for setting up a run.

QIASymphony SP 操作软件提供有向导，可提供设置运行的逐步指导。

The **Wizard** takes you through:

向导可指导您完成如下步骤：

Loading the “Waste” drawer

加载“洗脱物”抽屉

Loading the "Eluate" drawer

加载“洗脱物”抽屉

Loading the "Reagents and Consumables" drawer

加载“试剂和耗材”抽屉

Loading the "Sample" drawer

加载“样本”抽屉

Defining a batch/run with or without work lists

定义包含/不包含工作列表的批/运行

Loading internal controls

加载内参

It is possible to set up a run on the QIASymphony SP with or without the **Wizard**.

无论是否采用向导，均可在 QIASymphony SP 上设置运行。

<b>Important</b> <b>重要</b>	The <b>Wizard</b> can only be used for setting up independent sample preparation runs. It cannot be used to set up an integrated run. 向导仅可用于设置独立的样本制备运行，不可用于设置集成运行。
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<b>Important</b> <b>重要</b>	Although the <b>Wizard</b> cannot be used with integrated runs, the steps for loading the QIASymphony SP are the same for independent runs (which allow use of the <b>Wizard</b> ) and integrated runs. 尽管向导不可用于集成运行，但独立运行（可使用向导）和集成运行加载 QIASymphony SP 的步骤相同。
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<b>Important 重要</b>	<p>If you need assistance for using the QIASymphony SP, we recommend using the <b>Wizard</b>. The QIASymphony SP <b>Wizard</b> is comprehensive and easy to understand, providing step-by-step instruction for loading QIASymphony drawers.</p> <p>如果您需要使用 QIASymphony SP 方面的帮助，我们建议使用向导。QIASymphony SP 向导全面且易于理解，同时提供了加载 QIASymphony 抽屉的逐步提示。</p>
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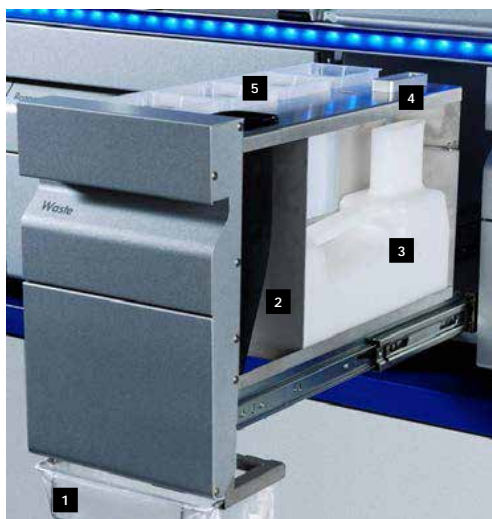
## 8.2 Loading the “Waste” drawer 加载“废弃物”抽屉

Used 8-Rod Covers and sample prep cartridges are discarded by the robotic gripper into the “Waste” drawer and are collected in 4 unit boxes in the drawer. 用过的 8 位磁棒套和样本制备卡夹由机械手夹持器扔弃到“废弃物”抽屉中，并为抽屉中的 4 个单元匣所收集。

A container in the “Waste” drawer collects liquid waste from the sample preparation procedure. “废弃物”抽屉中有一个容器用来收集样本制备程序中的废液。

Used disposable filter-tips are discarded into a tip disposal bag or waste bin. A tip park station in the waste drawer allows used tips to be temporarily stored on the worktable for reuse in a later protocol step.

用过的一次性带滤芯吸头将被扔弃至吸头处理袋中。废弃物抽屉中的吸头静置台允许吸头暂存在工作台上以备下一个程序步骤的重复利用。



**1** Tip disposal bag

- 吸头处理袋
- 2 Tip chute  
吸头槽
- 3 Liquid waste container  
废液容器
- 4 Tip park station  
吸头静置台
- 5 Empty unit boxes  
空单元匣

We recommend loading items into the “Waste” drawer in the following order:

我们建议按照如下顺序向“废弃物”抽屉中加载物品：

1. Insert empty liquid waste container (be sure to remove lid before placing into the drawer).  
插入空的废液容器（放入抽屉前务必去除外盖）。
2. Insert tip chute.  
插入吸头槽。
3. Insert tip park station.  
插入吸头静置台。
4. Insert empty unit boxes (make sure there is an empty unit box in slot 4).  
插入空的单元匣（确保槽 4 内有空的单元匣）。
5. Install empty tip disposal bag.

### 8.2.1 Tip park station 吸头静置台

The tip park station is on top of the liquid waste container. It channels liquid waste from the filter tips into the liquid waste container and also enables temporary storage of filter-tips that will be reused in a subsequent protocol step.

吸头静置台位于废液容器上方。其可以将来自于带滤芯的吸头的废液导流到废液容器中，同时可暂时储存在之后的实验步骤中重复使用的带滤芯吸头。

To load the tip park station into the “Waste” drawer, follow the steps below.  
如要将吸头静置台加载到“废弃物”抽屉中，需遵守如下步骤。

1. Open the “Waste” drawer.  
打开“废弃物”抽屉。
2. Ensure that the tip park station is properly inserted; otherwise an error may occur during the inventory scan.

The tip park station will be automatically detected during the inventory scan.  
在库存扫描期间，会自动检测吸头静置台。

## 8.2.2 Liquid waste container 废液容器

The liquid waste container is used to collect all liquid waste generated during sample preparation.

废液容器用于收集样本制备期间产生的所有废液。

To load the liquid waste container into the “Waste” drawer, follow the steps below.  
如要将废液容器加载到“废弃物”抽屉中，请遵照如下步骤进行。

1. Open the drawer.  
打开抽屉。
2. Place the liquid waste container at the rear right.  
将废液容器放在右后方。
3. Gently press the container downwards to put it properly in place.

<b>Important</b> <b>重要</b>	Make sure to remove the lid from the liquid waste container before you load the container into the drawer. 在将废液容器加载到抽屉中之前，务必先将其外盖移除。
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<b>Important</b> <b>重要</b>	Make sure to empty the liquid waste container at the end of each run. 每次运行完成后，务必清空废液容器。
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<b>Important</b> <b>重要</b>	<b>Important:</b> Be careful when handling the liquid waste container. It may contain infectious material. <b>重要：</b> 操作废液容器时务必小心谨慎。其内可能含有传染性材料。
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<b>Important</b> <b>重要</b>	The “Waste” drawer can only be closed when the liquid waste container is in place. 仅在废液容器安装就位时，才可闭合“废弃物”抽屉。
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## 8.2.3 Tip chute 吸头槽

The tip chute enables collection of used disposable filter-tips from the pipetting system. Used tips are collected in a tip disposal bag or, when using the QIASymphony Cabinet SP/AS, a waste bin.

吸头槽可用于收集移液系统中的用过的一次性带滤芯吸头。用过的吸头收集在吸头处理袋中，或废弃物箱（如果使用 QIASymphony 柜式 SP/AS）中。

<b>Important</b> <b>重要</b>	Make sure that the tip chute is placed into the “Waste” drawer. Install a tip disposal bag or position the waste bin before running a sample batch. 确认吸头槽已安装在“废弃物”抽屉中。在运行样本批次之前，安装吸头处理袋或放置废弃物箱。
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<b>Important</b> <b>重要</b>	If using the QIASymphony SP instrument with the QIASymphony Cabinet SP, refer to the <i>QIASymphony Cabinet SP/AS User Guide</i> for information about setup of the tip chutes. 如果结合 QIASymphony 柜式 SP/AS 使用 QIASymphony SP，请参阅 QIASymphony 柜式 SP/AS 用户指南了解有关吸头槽设置的信息。
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The tip chute will be detected during the inventory scan.

在库存扫描期间，会检测吸头槽。

#### 8.2.4 Tip waste collection

##### 吸头废弃物收集

##### 8.2.4.1 Tip disposal bag

##### 吸头处理袋

When using the QIASymphony SP instrument without the QIASymphony Cabinet SP, the tip disposal bag must be mounted below the “Waste” drawer.  
如果 QIASymphony SP 不与 QIASymphony 柜式 SP 一同使用，必须在“废弃物”抽屉下方安装吸头处理袋。

For more information, refer to Section 9.6, “Mounting the tip disposal bag”, of the *QIASymphony SP/AS User Manual – General Description*.  
如需了解更多信息，请参阅“QIASymphony SP/AS 用户手册 - 概述”第 9.6 节“安装吸头处理袋”。

If using the QIASymphony SP in combination with the QIASymphony Cabinet SP, refer to the *QIASymphony Cabinet SP/AS User Guide* for information about tip disposal.

如果 QIASymphony SP 与 QIASymphony 柜式 SP 联用，则请参阅《QIASymphony 柜式 SP/AS 用户指南》了解有关吸头处理的信息。

#### 8.2.4.2 Waste bin 废弃物箱

When using the QIASymphony Cabinet SP, tips are disposed directly into the waste bin, located below the waste chute exit.

如果使用 QIASymphony 柜式 SP，吸头直接丢弃到位于废物槽出口下方的废弃物箱中。

#### 8.2.5 Unit boxes 单元匣

Used sample prep cartridges and 8-Rod Covers are collected in unit boxes. There are 4 slots for unit boxes in the “Waste” drawer and, for increased ease of use and process safety, unit boxes can only be loaded in the correct orientation. 用过的样本制备卡夹和 8 位磁棒套收集在单元匣内。在“废弃物”抽屉内，共有 4 个单元匣槽、为了方便使用、操作更安全，单元匣仅可沿着正确的方向加载。

Depending on the purification procedure being run and the number of samples, the space needed for used consumables in the “Waste” drawer will vary.

根据正在进行的纯化操作程序及样本数量，“废弃物”抽屉内的所用耗材所需的空间也存在差异。

To load the “Waste” drawer with unit boxes, follow the steps below.

如要向“废弃物”抽屉加载单元匣，请按照如下步骤执行。

1. Remove the lid from the unit box.  
移除单元匣盖。
2. If the unit box contains a spacer, make sure to remove this.  
如果单元匣内含有垫片，必须将其移除。
3. Place the unit box into one of the unit box slots.





Slot 4  
槽 4

Unit box slots (slot 4 indicated)

单元匣槽（图示槽 4）。

<p><b>Important</b> <b>重要</b></p>	<p>The spacer at the bottom of an empty 8-Rod Cover unit box must be removed before the unit box is placed into the “Waste” drawer, otherwise an error may occur during the inventory scan. 在将单元匣放入“废弃物”抽屉之前，必须移除空 8 位磁棒套单元底部的垫片，否则可能在库存扫描时出错。</p>
<p><b>Important</b> <b>重要</b></p>	<p>An empty unit box must be placed into slot 4. During initialization the handler goes down into the unit box in position 4. If the unit box is not empty, the handler will crash. 空单元匣必须放在槽 4 内。在启动时，把手下降进入到位置 4 内的槽。如果单元匣不为空，则会与把手发生碰撞。</p>
<p><b>Important</b> <b>重要</b></p>	<p>Do not empty partially filled unit boxes. Partially filled unit boxes will be detected during the inventory scan and can be used until they are full. 不要清空部分灌注的单元匣。在库存扫描时，会检测到部分灌注的单元匣，直到其完全注满之后才可使用。</p>

<b>Important</b> <b>重要</b>	Do not throw away the lids of open unit boxes. They can be used to cover partially filled unit boxes. 请勿丢弃打开的单元匣的外盖，它们还可用来覆盖部分灌注的单元匣。
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### 8.2.6 Closing the “Waste” drawer

#### 关闭“废弃物”抽屉

After preparing the “Waste” drawer, the drawer must be closed to initiate the inventory scan.  
准备好“废弃物”抽屉后，必须将其关闭从而开始库存扫描。

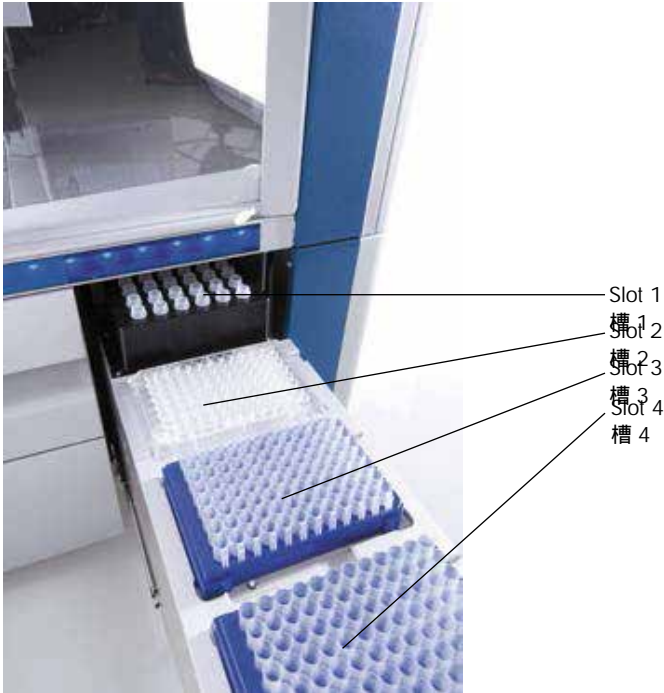
### 8.3 Loading the “Eluate” drawer

#### 加载“洗脱物”抽屉

#### 8.3.1 Features of the “Eluate” drawer

##### “洗脱物”抽屉功能

Purified nucleic acids are transferred to the “Eluate” drawer. The “Eluate” drawer contains 4 slots that can be used for elution into plates or tubes.  
纯化后的核酸和蛋白会被移至“洗脱物”抽屉中。“洗脱物”抽屉包含 4 个可供洗脱到孔板或试管使用的槽。



The "Eluate" drawer.  
“洗脱物”抽屉

“Elution slots 2–4” can accommodate plates or tubes in special adapters.

“洗脱物槽 2-4”可容纳专用适配器内的反应板或试管。

<p>Slot 1 槽 1</p>	<p>“Elution slot 1” enables eluate cooling and requires use of a specially designed cooling adapter for various plate formats (e.g., 96-well, PCR tubes). Cooling parameters are defined in the protocol. In some protocols, the user may be able to choose whether to leave eluate cooling on or to turn it off. However, we do not recommend turning off eluate cooling if this is required by the protocol. “洗脱物槽 1”支持洗脱物冷却的功能，需要使用特别设计用于多种孔板格式的冷却适配器（如，96 孔 PCR 试管）。 冷却参数已在程序中定义。在部分程序中，用户可能可选择是否让洗脱物保持冷却状态或者将其关闭，但如果试验程序需要，我们不建议关闭冷却状态。</p>
<p>Slot 2 槽 2 Slot 3</p>	<p>“Elution slot 2” and “Elution slot 3” can accommodate 96-well plates, and tubes. “洗脱物槽 2”和“洗脱物槽 3”可容纳 96 孔板、24 孔板和试管。</p>

槽 3	
Slot 4 槽 4	<p>“Elution slot 4” can accommodate 24-well plates or tubes in special adapters.</p> <p>For technical reasons, 96-well elution racks cannot be used on “Elution slot 4”.</p> <p>“洗脱槽 4”通过特制适配器可容纳 24 孔板或试管。因技术原因，96 孔洗脱架无法用于“洗脱槽 4”。</p>

### 8.3.1.1 Adapters 适配器

Adapters are available for the following types of consumables:

适配器适用的耗材类型如下：

Microplate, round bottom

Sarstedt® screw-cap tubes (2 ml)

PCR plate

Elution Microtubes CL (cat. no. 19588)

圆底微孔反应板

Sarstedt®螺旋帽试管(2 ml)

PCR 反应板

洗脱微试管(2 ml)

For more information about the types of 96-well plates and tubes that can be used in the “Eluate” drawer, visit [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony).

有关“洗脱物”抽屉中可用的 96 孔板和试管类型的更多信息，请访问 [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony)。

<b>Important</b> <b>重要</b>	Ensure that elution racks or tubes are compatible with the QIASymphony SP. 只请确保洗脱物架或试管兼容 QIASymphony SP。
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If multiple sample batches are being processed, eluted nucleic acids can be removed from the “Eluate” drawer as soon as each batch is ready. The “Eluate” drawer will unlock and the “E” button will become green. The green color of the “E” button informs the user that eluates may be removed.

如果同时处理多个样本批，每一批一经处于准备状态即要从“洗脱物”抽屉中移出洗脱后的核酸或蛋白。“洗脱物”抽屉将解锁，“E”按钮将变为绿色。绿色“E”按钮告知用户洗脱物可以移出。

<b>Important</b> <b>重要</b>	Ensure that the plates and racked tubes are held securely in the slot by the white pins. 请确保反应板和基座支撑的试管都通过白色的销钉固定在槽内。
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<b>Important</b> <b>重要</b>	A handheld scanner is used to identify bar codes on elution racks and elution slots in the “Eluate” drawer. 手持式扫描仪可用于识别洗脱物架和“洗脱物”抽屉内的洗脱物槽上的条形码。
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### 8.3.2 Loading procedure 加载操作程序

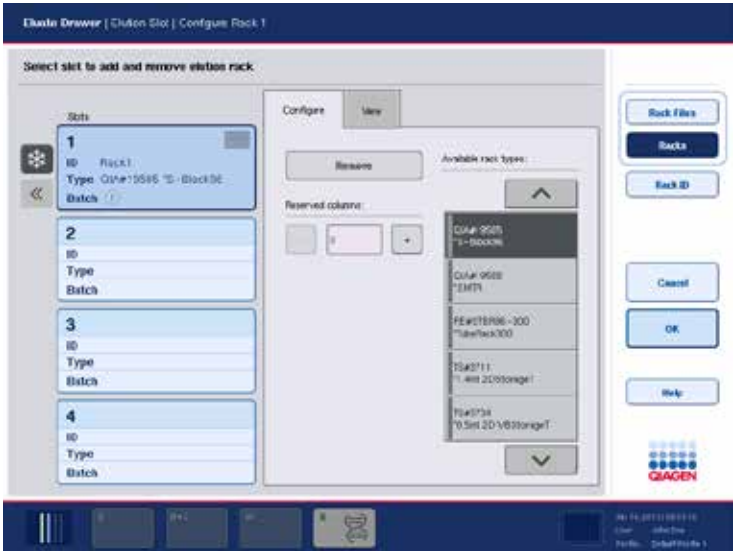
To load the “Eluate” drawer, follow the steps below.  
如要加载“洗脱物”抽屉，请按照如下步骤进行。

1. Prepare the elution racks.  
准备洗脱管架。
2. If required, place elution racks into the appropriate adapter.  
如有必要，将洗脱管架放入对应的适配器中。
3. Open the “Eluate” drawer to display the **Elution Slot/Configure Racks** screen.  
打开“洗脱物”抽屉以显示出“洗脱物槽/配置管架”界面。
4. Press the slot button in the touchscreen of the elution slot that you want to add a rack to.  
点击洗脱物槽触摸屏上与您想要添加的管架对应的槽按钮。
5. If the elution rack is bar code labeled, scan the bar code using the handheld scanner.  
Alternatively, press **Rack ID**, and enter the elution rack ID manually using the **Keyboard** screen that appears.  
如果洗脱架采用条形码标记，则通过手持式扫描仪扫描条形码。或者点击架 ID，然后通过出现的键盘界面手动输入洗脱架 ID。

<b>Important</b> <b>重要</b>	<p>This step is optional for some instruments, depending on the configuration. For more information, refer to the <i>QIASymphony SP/AS User Manual — General Description</i>.</p> <p>根据具体的配置，此步骤可为部分仪器选用。如需了解更多信息，请参阅“QIASymphony SP/AS 用户手册 – 概述”。</p>
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The entered elution rack ID is displayed in the screen. The slot is colored yellow to indicate that the rack type needs to be defined.

输入的洗脱架 ID 显示在界面内。该槽显示为黄色，表明需要定义该管架的类型。



6. Place the elution rack with well A1 in the upper left corner onto the desired elution slot. Make sure that the rack is held securely by the white pins.

放置洗脱架，确保 A1 孔位于目标洗脱槽的左上角。确保管架已采用白色销钉牢牢固定。

If the protocol requires eluate cooling or if you are planning to set up an integrated run, make sure to use slot 1. Place the elution rack into the appropriate cooling adapter.

如果程序需要冷却洗脱物，或者您计划设置集成运行，务必使用槽 1。请将洗脱架放入对应的冷却适配器中。

<b>Important</b> <b>重要</b>	<p>Elution rack cooling can be turned off by pressing the snowflake button to the left of “Elution slot 1”. We do not recommend turning off elution rack cooling if this is required by the protocol.</p> <p>可以通过点击“洗脱槽 1”左侧的雪花按钮，关闭洗脱管架冷却功能。如果程序需要，我们建议不关闭洗脱管架冷却功能。</p>
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7. An adapter may be required depending on the elution rack being used.

根据所用的洗脱管架类型，可能需要使用适配器。

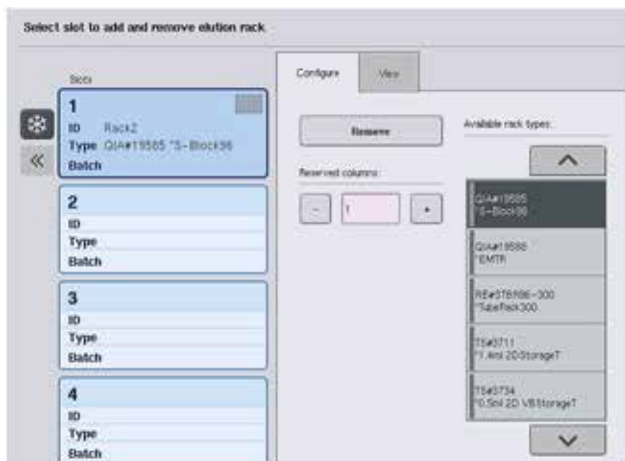
Select the elution rack type from the list. Use the up and down arrows to scroll through the list.  
从列表中选择洗脱管架类型。您可使用上下箭头在列表中上下滚动。

<b>Important</b> <b>重要</b>	The QIASymphony SP provides automated assignment of elution racks. If you are using an Elution Microtube Rack (EMTR), scan the bar code of the rack and the elution rack type will be automatically selected by the QIASymphony SP. QIASymphony SP 提供了洗脱管架自动分配功能，。如果您正在使用洗脱微管架 (EMTR)，可扫描管架上的条形码，QIASymphony SP 会自选择洗脱管架类型。
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<b>Important</b> <b>重要</b>	If the elution rack was used in a previous run, cooling will be switched on by the QIASymphony SP automatically when the next batch requiring eluate cooling is ordered. 如果之前的运行已经使用过洗脱管架，则下一个需要冷却洗脱物的批次排队时，QIASymphony SP 会自动开启冷却功能。
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<b>Important</b> <b>重要</b>	The maximum number of columns that can be reserved depends on the rack size and on the batches that are already queued for that slot. 可预留的柱的最大数目取决于根据的大小及已经在槽上排队的批次。
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**Important:** If there are already eluates in an elution rack from a previous run loaded in the "Eluate" drawer, ensure that the cooling temperatures are suitable for these eluates on the same elution rack. Otherwise, the eluates may be given the status "invalid". The QIASymphony SP cannot detect whether cooling temperatures are suitable for eluates that are already loaded from previous runs in the "Eluate" drawer.  
**重要：**如果之前运行载入到“洗脱物”抽屉中的洗脱管架内已经含有洗脱物，请确保冷却温度适于相同洗脱管架上的此类洗脱物。否则，洗脱物可能给出“无效”的状态。QIASymphony SP 无法检测冷却温度是否适于已经在之前的运行载入到“洗脱物”抽屉中的洗脱物。



8. If you need to load more elution racks in the “Eluate” drawer, repeat the loading procedure as previously described in this section before proceeding to the next step.  
如果您需要在“洗脱物”抽屉中加载更多的洗脱管架，请在进行下一步骤之前，重复本节前述的加载步骤。
9. Close the “Eluate” drawer and press **OK**.  
选择“洗脱物”抽屉并点击“OK”。

The QIAasymphony SP performs an inventory scan of the “Eluate” drawer. Sample processing pauses and the robotic arm moves to the “Eluate” drawer to check that selected elution slots contain an elution rack. QIAasymphony SP 进行一次“洗脱物”抽屉库存扫描。样本处理暂停，机械臂移动到“洗脱物”抽屉以核查所选的洗脱槽是否含有洗脱管架。

<b>Important</b> <b>重要</b>	It is not possible to proceed to the next screen until the inventory scan is complete. 在库存扫描完成前，不可进入下一界面。
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### 8.3.3 Transfer module 传送模块

Within the integrated mode, elution racks can be automatically transferred from the QIAasymphony SP via the transfer module to slot 2 of the “Eluate and Reagents” drawer of the QIAasymphony AS instrument.

在集成模式下，洗脱管架可通过传送模块自动从 QIAasymphony SP 移动到 QIAasymphony AS 的“洗脱物和试剂”抽屉的槽 2。

The transfer frame consists of a base frame and a handle. If you intend to use automatic transfer of an elution rack to the QIAasymphony AS via the transfer module, ensure that the transfer frame is installed before placing the relevant adapter onto slot 1 of the “Eluate” drawer.



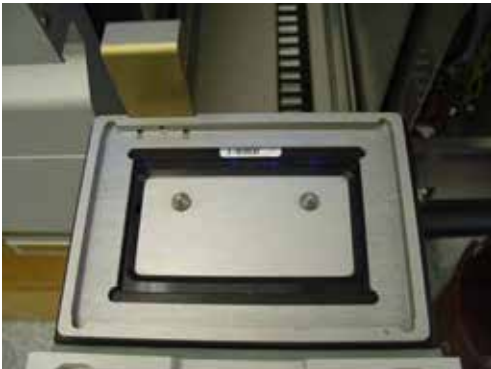
传送框包含一个基座框和一个把手。如果您希望通过传送模块将洗脱管架移动到 QIAsymphony AS, 则需确保在将相应的适配器放到“洗脱物”抽屉的槽 1 上之前, 已安装传送框。

To install the transfer frame, follow the steps below.

如需安装传送框, 请按照如下步骤进行。

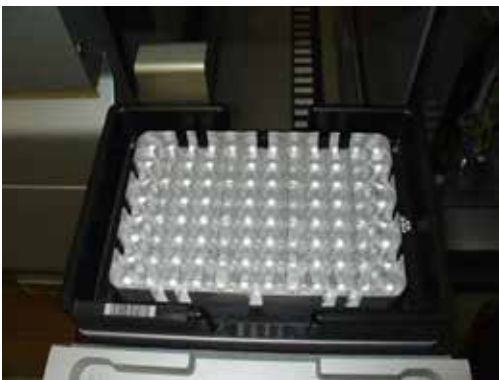
1. Place the transfer frame onto slot 1, so that the 4 pins under the base frame fit into the screw holes of slot 1. The handle should face toward the back left corner of slot 1.

请将传送框放置到槽 1 上, 使基底框以下的 4 个销钉恰好插入到槽 1 的螺丝孔中。把手应当朝向槽 1 的后左方。



Transfer frame placed onto slot 1 of the "Eluate" drawer.  
放置到“洗脱物”抽屉槽 1 的传送框

2. Place the appropriate adapter and elution rack on top of the transfer frame. 放置适宜的适配器和洗脱架到传送框的顶端。



Adapter placed onto the transfer frame on slot 1 of the "Eluate" drawer.  
适配器已放置到“洗脱物”抽屉槽 1 上的传送框上

The “Eluate” drawer is locked during:

“洗脱物”抽屉在以下情况下锁定：

Transfer of eluates from sample prep cartridges to the elution rack

将样本制备卡夹移动到洗脱管架上时

During the inventory scan of the “Eluate” drawer

“洗脱物”抽屉进行库存扫描时

During transfer of eluates from the QIASymphony SP to the QIASymphony AS via the transfer module

洗脱物通过传送模块从 QIASymphony SP 移动到 QIASymphony AS 时

During an integrated run

集成运行时

At all other times, the “Eluate” drawer can be opened or closed.

在其他任意时刻，“洗脱物”抽屉均可开闭。

#### 8.3.4 Unloading the “Eluate” drawer

##### 卸除“洗脱物”抽屉

Elution racks must be manually unloaded from the “Eluate” drawer.  
洗脱管架必须从“洗脱物”抽屉上手动卸除。

If using QIASymphony SP/AS instruments in integrated run mode, an elution rack on “Elution slot 1” will be automatically transferred from the QIASymphony SP to the AS module to start the reaction setup. Afterwards, the elution rack will be automatically transferred back to the QIASymphony SP “Eluate” drawer.

如果在集成运行模式下使用 QIASymphony SP/AS 仪器，则“洗脱槽 1”上的洗脱管架会自动从 QIASymphony SP 转移到 AS 模块，从而启动反应设置。之后，洗脱架会自动移回 QIASymphony SP 洗脱物抽屉。

If using QIASymphony SP/AS instruments in the independent mode, the elution rack can be directly transferred to the “Eluate and Reagents” drawer of the QIASymphony AS by using the **Transfer** button.

如果在独立模式下使用 QIASymphony SP/AS 仪器，则洗脱管架可通过“转移”按钮直接转移到 QIASymphony AS 的“洗脱物和试剂”抽屉。

To transfer elution racks from any elution slot other than “Elution slot 1”, a manual transfer must be performed. For increased flexibility, elution racks can be removed from the “Eluate” drawer before a protocol run in independent mode has finished. As soon as eluates have been

transferred to an elution rack, the elution rack can be removed from the drawer.

如要从“洗脱槽 1”之外的任意其他洗脱槽转移洗脱管架，必须进行手动转移。为了提高灵活性，在独立模式下的程序运行完成前，可以从“洗脱物”抽屉上移除洗脱管架。洗脱物转移到洗脱管架上后，即可从抽屉上移除洗脱管架。

<b>Important</b> <b>重要</b>	If the rack will be used for another batch, this is not possible. 如果该管架还会在另一批次使用，则不可进行此操作。
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<b>Important</b> <b>重要</b>	If an elution rack is ready to be unloaded, the “E” button in the status bar at the bottom of the touchscreen becomes green. 如果洗脱管架已经卸除，则触摸屏底部状态栏内的“E”按钮变为绿色。
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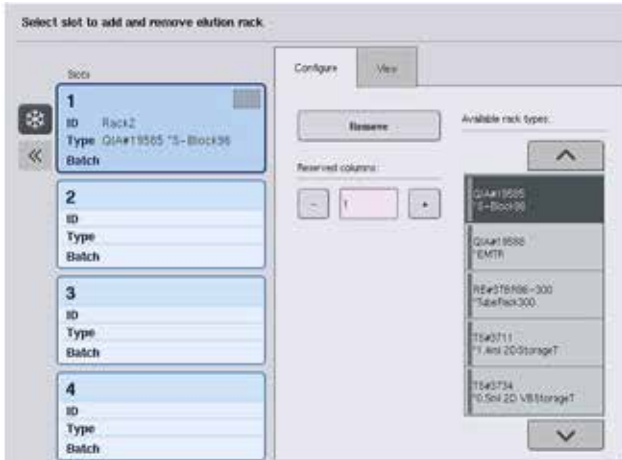
When an elution rack is removed, the rack file for the elution rack is finalized and the result file for the elution rack is generated. The rack file and result file can be downloaded using the QIAsymphony Management Console or via file transfer from the QIAsymphony SP to the USB stick.

洗脱管架移除后，洗脱管架的管架文件固定下来，生成洗脱管架的结果文件。管架文件和结果文件可通过 QIAsymphony 管理控制台下载，或者通过文件传输工具从 QIAsymphony SP 传输到 USB 盘。

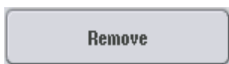
For a detailed description of how to manually remove elution racks, see the following sections. 有关如何手动移除洗脱管架的详细描述，请参阅后文章节。

#### 8.3.4.1 Manually removing an elution rack 手动移除洗脱管架

1. Open the “Eluate” drawer.  
打开“洗脱物”抽屉。  
The **Eluate Drawer/Elution Slot** screen appears.  
随即出现“洗脱物抽屉/洗脱槽”界面。
2. Select the elution slot from which the elution rack should be removed.  
从中选中想要移除洗脱管架的洗脱槽。  
The **Eluate Drawer/Elution Slot/Change Rack X** screen appears.  
随即出现“洗脱物抽屉/洗脱槽/更换管架 X”界面。



3. Press the **Remove** button in the **Configure** tab to remove the elution rack from the inventory.



点击“配置”标签内的“移除”按钮，从库存中移除洗脱管架。

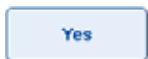
A message asking whether you want to remove the elution rack from the selected slot appears.

随即出现一条消息，提示您是否希望从选定的槽中移除洗脱管架。



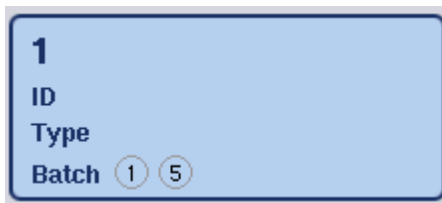
4. Press **Yes** to continue.

点击“是”继续。



The **Eluate Drawer/Elution Slot/Change Rack X** screen is displayed. The rack on the selected slot is removed.

随即显示“洗脱物抽屉/洗脱槽/更换管架 X”界面。选定的槽上的管架已经移除。



5. Remove the elution rack from the elution slot.

从洗脱槽上移除洗脱管架。

If the elution rack was used with an elution adapter, also remove the adapter.

如果洗脱管架与洗脱适配器配合使用，适配器也会随之移除。

6. To unload additional elution racks, repeat the process.

如要卸除其他洗脱管架，可重复执行此流程。

7. When all elution racks have been unloaded, close the “Eluate” drawer.

所有的洗脱管架均卸除后，闭合“洗脱物”抽屉。

The **Eluate Drawer/Elution Slot/Configure Rack X** screen appears.

随即出现“洗脱物抽屉/洗脱槽/配置管架 X”界面。

8. Press **OK**.

The QIASymphony SP performs an inventory scan of the “Eluate” drawer.

Afterwards the **Sample Preparation/Overview** screen is displayed. .

QIASymphony SP 会进行一次“洗脱物”抽屉库存扫描。之后，将会显示“**样本制备/概览**”界面。



<b>Important</b> <b>重要</b>	If eluate cooling in “Elution slot 1” was turned on, it will be turned off as soon as the <b>OK</b> button or <b>Yes</b> button is pressed. 如果“洗脱槽 1”内的洗脱物冷却功能开启，则此功能会在按下“ <b>OK</b> ”或“ <b>是</b> ”按钮后关闭。
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## 8.4 Loading the “Reagents and Consumables” drawer 加载“试剂和耗材”抽屉

The “Reagents and Consumables” drawer accommodates all consumables and reagents required for the protocol run.

“试剂和耗材”抽屉装载程序运行所需的所有的耗材和试剂。

Before starting a protocol run, the drawer must be loaded with the appropriate reagents in prefilled, sealed reagent cartridges, sample prep cartridges, 8-Rod Covers, and disposable filter-tips. In some cases, an Accessory Trough and buffer bottle may be required.

在开始一个程序运行前，抽屉必须加载预装、密封的试剂条、样本制备卡夹、8 位磁棒套和一次性带滤芯吸头。在某些情况下，可能还需要配件料槽和缓冲瓶。

Depending on the kit being used, different types or amounts of consumables may be required. For more information, refer to the handbook of the QIASymphony Kit you are using. 根据所用的试剂盒，所需的耗材类型或耗材量可能会有所不同。更多信息请参阅所用 QIASymphony 试剂盒手册。

#### 8.4.1 Loading consumables 加载耗材

##### 8.4.1.1 Unit boxes 单元匣

Consumables required for sample preparation are placed onto the QIASymphony SP worktable in unit boxes. Unit boxes are provided with a lid. There are 4 slots for unit boxes. 样本制备所需的耗材需放置到单元匣内的 QIASymphony SP 工作台上。单元匣配备有盖子。共有 4 个单元匣。

To load unit boxes, follow the steps below.

如需加载单元匣，请按如下步骤操作：

1. Remove the lid from the unit box and keep for later use. Lids can be used to reclose partially used unit boxes.  
移除单元匣盖子并保存备用。盖子可用于局部密封所用的单元匣。

2. Place unit boxes containing either unused 8-Rod Covers or sample prep cartridges into the “Reagents and Consumables” drawer.  
将包含未用过的 8 位磁棒套或样本制备卡夹的单元匣放置到“试剂和耗材”抽屉中。

Unit boxes are designed so that they fit into the instrument drawer only in the correct orientation. 单元匣设计使得只有以正确的位姿才能恰好装进仪器抽屉中。



Consumables used in sample preparation on the QIASymphony SP.  
 在 QIASymphony SP 上进行样本制备所使用的耗材。

Each unit box slot in the “Reagents and Consumables” drawer can be used either for a unit box filled with sample prep cartridges or a unit box filled with 8-Rod Covers. Partially used unit boxes can be loaded into the drawer since the number of sample prep cartridges or 8-Rod Covers they contain will be detected during the inventory scan.

“试剂和耗材”抽屉内的每个单元匣槽可用于填充样本制备卡夹或 8 位磁棒套。在库存扫描期间，会检测到部分使用过的单元匣内的样本制备卡及 8 位磁棒套数目，这一类单元匣也可载入抽屉。

Typically, more sample prep cartridges will be required than 8-Rod Covers and this needs to be taken into account when loading the QIASymphony SP with unit boxes.

通常情况下，相对于 8 位磁棒套，单元匣需要更多的样本制备卡夹，并且在加载 QIASymphony SP 和单元匣时就应考虑到这一要求。

<b>Important</b> <b>重要</b>	Do not refill partially used unit boxes. The number of sample prep cartridges or 8-Rod Covers is detected during the inventory scan. 请勿填充部分使用过的单元匣。库存扫描期间，会检测到样本制备卡夹或 8 位磁棒套的数目。
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<b>Important 重要</b>	<p>Do not throw empty unit boxes away. Empty unit boxes can be used in the “Waste” drawer for collection of used sample prep cartridges and 8-Rod Covers during the purification procedure.</p> <p>请勿丢弃空的单元匣。空的单元匣可在“废弃物”抽屉中使用，可用于收集纯化操作过程中所用的样本制备卡夹和 8 位磁棒套。</p>
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#### 8.4.1.2 8-Rod Covers 8 位磁棒套

An 8-Rod Cover is an array of 8 rod covers that cover the magnetic rods of the magnetic head.  
8 位磁棒套为覆盖磁头磁棒的 8 位磁棒套阵列。

Each unit box can hold a maximum of twelve 8-Rod Covers.

每个单元匣可容纳最多 12 个 8 位磁棒套。

There is a spacer between the bottom of the unit box and the last 8-Rod Cover.

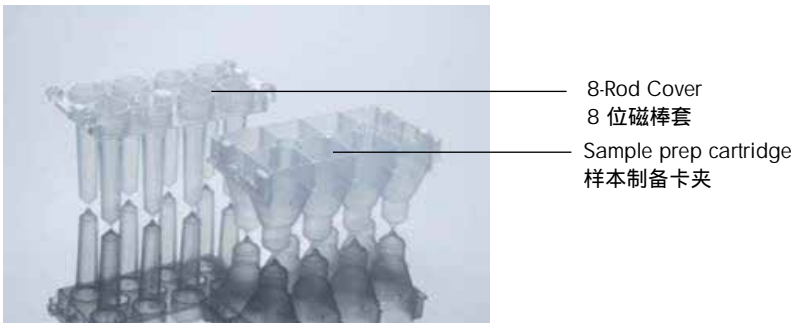
单元匣底部和最后一个 8 位磁棒套之间留有间距。

A specific pattern on the top and bottom edge of an 8-Rod Cover enables automatic detection by the QIASymphony SP during the inventory scan.

样本制备卡夹上下缘的特定类型允许 QIASymphony SP 在库存扫描过程中对其进行自动检测。

The number of 8-Rod Covers in a unit box is also detected during the inventory scan.

库存扫描时还将检测单元匣内 8 位磁棒套的数目。



8-Rod Covers and sample prep cartridge.  
8 位磁棒套和样本制备卡夹。

#### 8.4.1.3 Sample prep cartridges 样本制备卡夹

Sample prep cartridges are the vessels used by the QIASymphony SP during purification of nucleic acids. Each well of a sample prep cartridge can hold up to 3 ml of liquid.



样本制备卡夹为 QIASymphony SP 在纯化核酸或蛋白过程中所使用的容器。样本制备卡夹的每个孔均可装有至多 3ml 液体。

Sample prep cartridges are provided in sealed unit boxes. Each unit box can hold a maximum of 28 cartridges. A specific pattern on the top and bottom edge of a sample prep cartridge enables automatic detection by the QIASymphony SP during the inventory scan. The number of sample prep cartridges in a unit box is also detected during the inventory scan. The robotic handling system can pick up a maximum of 3 sample prep cartridges simultaneously.

样本制备卡夹装在密封的单元匣内。每个单元匣可容纳最多 28 个样本制备卡夹。样本制备卡夹上缘和下缘的特定类型可使 QIASymphony SP 在库存扫描过程中对其进行自动检测。库存扫描时还将检测单元匣内样本制备卡夹的数目。机械手夹持器可同时抓取最多 3 个样本制备卡夹。

#### 8.4.1.4 Tip racks 吸头管架

The QIASymphony SP uses 1500 µl filter-tips and 200 µl filter-tips.

QIASymphony SP 采用 1500 µl 的带滤芯吸头和 200 µl 的带滤芯吸头。

Filter-tips are provided in sealed blister packs, with 32 filter-tips in one tip rack.

带滤芯吸头用密封泡罩包装，每个吸头架内含有 32 个带滤芯吸头。

For increased ease of use, racks containing 1500 µl filter-tips are black and racks containing 200 µl filter-tips are blue.

为了使用方便，装 1500 µl 带滤芯吸头的吸头架为黑色，装 200 µl 带滤芯吸头的吸头架为蓝色。

Each type of tip rack has a different pattern on the upper and lower side. This enables detection of the type of filter-tip during the inventory scan.

每个类型的吸头架在上下侧均有不同的式样。这使带滤芯吸头的类型在库存扫描过程中可被检测得到。

There are 18 tip rack slots.

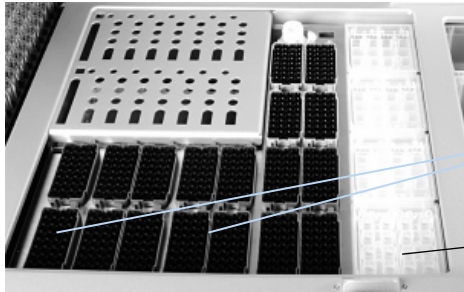
共有 18 个吸头管架槽。

Tip racks can be placed in any of the slots since rack position, tip type, and number of tips are detected during the inventory scan.

由于库存扫描期间可以检测到管架位置、吸头类型以及吸头数目，故吸头管架可放在任意槽上。

The number of tips required per sample varies depending on the protocol being run.

每种样本所需的吸头数目因所运行的程序而异。



Tip rack slots  
吸头架槽

Unit box slots  
单元匣槽

Tip racks.  
吸头架。

To load the QIASymphony SP with tip racks, follow the steps below.  
如要加载 QIASymphony SP 和吸头架，请按如下步骤操作。

1. Hold the tip rack between 2 fingers by the recessed grips.  
将吸头架固定在用嵌入式夹持器的两个卡爪间。
2. Gently squeeze the tip rack together and place it into a tip rack slot.

<b>Important</b> <b>重要</b>	<p>To ensure detection of the tip racks during the inventory scan, make sure that the tip racks are properly seated in the tip rack slot and that none of the protrusions on the tip racks are broken.</p> <p>为确保库存扫描期间可以检测到吸头架，请确保吸头架正确安装在吸头架槽内，且吸头架上无突出部分损坏。</p>
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<b>Important</b> <b>重要</b>	<p>Each tip type contains a filter to help prevent cross-contamination.</p> <p>每个吸头类型均带有滤芯，有助于预防交叉污染。</p>
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<b>Important</b> <b>重要</b>	<p>Do not refill partially used tip racks. The number of filter-tips will be detected during the inventory scan.</p> <p>请勿重装部分使用的吸头架。库存扫描时将检测带滤芯吸头的数目。</p>
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#### 8.4.2 Reagent cartridges 试剂条

The required reagent cartridges are determined by the QIASymphony SP from the protocols that were chosen by the user.

根据用户选择的程序，可通过 QIASymphony SP 确定所需的试剂条。

The reagent cartridges can be either from the same kit or from different kits.

试剂条可来自于同一试剂盒或不同的试剂盒。

Reagents required for the purification procedure are provided in prefilled, sealed reagent cartridges.

预装的密封试剂条中备有纯化程序所需的试剂。

Up to 2 reagent cartridges can be loaded into the “Reagents and Consumables” drawer.

最多可将 2 个试剂条装载到 “试剂和耗材” 抽屉中。

For increased ease of use, reagent cartridges fit only in the correct orientation.

为便于使用，试剂条仅可以正确位姿放置。

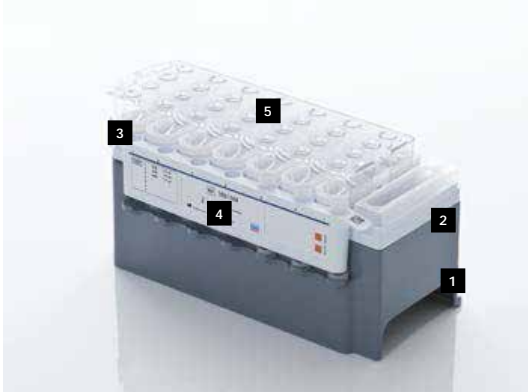
1. The user first vortexes the magnetic-particle trough and then removes the seal from the magnetic-particle trough.  
用户首先涡旋磁珠试剂槽，然后移除磁珠试剂槽的封条。
2. Remove the lids from the tubes and place into the appropriate slot to prevent mix-up.  
移除试管盖，然后将试管放入对应的槽中，以免混在一块。
3. When the piercing lid has been properly installed before loading, the reagent cartridge is then automatically opened by the QIASymphony SP, which eliminates manual handling and pouring of reagents.  
在加载前已经正确安装穿孔盖时，QIASymphony SP 会自动打开试剂条，这免去了手动握持和倾倒试剂。

Each individual reagent in the reagent cartridge is labeled with a 2D bar code, enabling tracking of reagents through the entire purification procedure.

试剂条内的每个单独试剂均带有二维条形码标签，从而可实现在整个纯化流程中进行试剂追踪。

Before the run starts, the system checks whether the reagent volumes are sufficient for the chosen protocol.

运行开始前，系统会检查试剂体积是否足够供选中的程序使用。



- Reagent cartridge holder
- 1** 试剂条基座
- 2** Magnetic-particle holder  
磁珠基座
- 3** Reagent troughs  
试剂槽
- 4** Enzyme rack  
酶管架
- 5** Piercing lid  
穿孔盖

The reagent cartridge contains sufficient reagents for up to 192 samples, depending on the kit being used. Troughs of partially used reagent cartridges should be sealed immediately after use with Reuse Seal Strips (provided in the QIASymphony Kit).

试剂条包含至多 192 个样本的充足试剂，这要视正在运行的程序而定。已部分使用的试剂条的试剂槽在使用后应立即用可重复使用的密封条（QIASymphony 试剂盒随附）进行密封。

<b>Important</b> <b>重要</b>	<p>Do not refill partially used reagent cartridges as this may lead to performance and pipetting errors.</p> <p>不得重装已部分使用的试剂条，因为这可能引起操作或移液误差。</p>
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<b>Important</b> <b>重要</b>	The length of time that the reagent cartridge is open must be kept as short as possible. 试剂条打开的时长必须尽可能地保持在较短的时间内。
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All reagent troughs and enzyme racks are labeled at the side with the name of the buffer contained in the trough. A unique 2D bar code on top of each trough enables the QIASymphony SP to detect the reagent cartridge and the contents of each trough.

所有试剂槽和酶架在侧面均贴有试剂槽所含缓冲液的名称标签。每个试剂槽顶端的唯一二维条形码使得 QIASymphony SP 可检测到试剂条和每个试剂槽的内容物。

The composition of the reagent cartridge is kit-specific. Do not mix troughs from different kits.

试剂条的成分是试剂盒专用的，请勿混用不同试剂盒的试剂槽。

Visually check all reagent troughs for precipitates. If precipitates are present, refer to the handbook of the QIASymphony Kit you are using for more information.

目测检查所有试剂槽是否存在沉淀物。如果存在沉淀物，请参阅您正在使用的试剂盒手册获取更多信息。

<b>Important</b> <b>重要</b>	Make sure that reagents and enzymes are at room temperature (15–25°C) before placing into the “Reagents and Consumables” drawer. 确保试剂和酶放置到“试剂和耗材”抽屉之前是处于室温(15–25°C)下保存的。
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<b>Important</b> <b>重要</b>	Do not autoclave a prefilled reagent cartridge. Do not change the order of the troughs within the reagent cartridge. 请勿高压灭菌预装试剂条。请勿改变试剂条内的试剂槽顺序。
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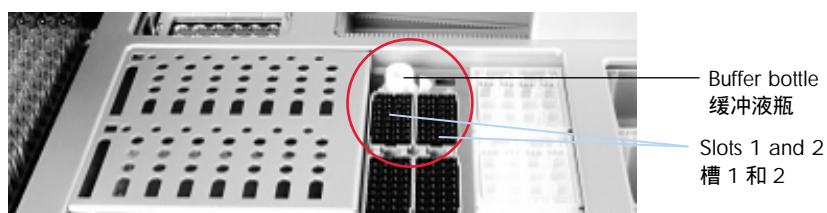
<b>Important</b> <b>重要</b>	<p>Avoid shaking the reagent cartridge since this may cause buffers to foam, resulting in liquid-level detection errors.</p> <p>请勿振荡试剂条，因为会造成缓冲液产生泡沫，引起液位检测误差。</p>
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### 8.4.3 Buffer bottle 缓冲液瓶

Depending on the kit being used, an additional bottle of buffer may be provided. The bottle is prefilled with up to 60 ml of reagent.  
根据所使用试剂盒的不同，可能需要提供另外的缓冲液瓶。缓冲瓶可至多预装 60ml 的试剂。

To load the QIASymphony SP with the buffer bottle, follow the steps below.

1. Remove the screw-cap from the buffer bottle.  
移除缓冲液瓶上的螺帽。
2. Press **Bottle ID** in the **Load Reagents** screen.  
点击“加载试剂”界面内的“瓶 ID”。
3. Scan the buffer code by using the handheld bar code scanner. Alternatively, type in the bar code using the **Keyboard** screen.  
使用手持式条形码扫描仪扫描缓冲液条形码，或者使用“键盘”界面输入条形码。
4. Place the bottle into the slot behind the rear end of the tip rack slots 1 and 2.



Buffer bottle slot.  
缓冲液瓶槽。

The buffer bottle and volume of buffer will be automatically detected during the inventory scan.  
库存扫描期间，系统会自动检测缓冲液瓶和缓冲液体积。

#### 8.4.4 Accessory Trough 配件料槽

If the purification procedure requires additional ethanol, this must be poured by the user into an Accessory Trough, which is then placed into either tip rack slot 5 or 12. These slots can be used for either tip racks or Accessory Troughs.

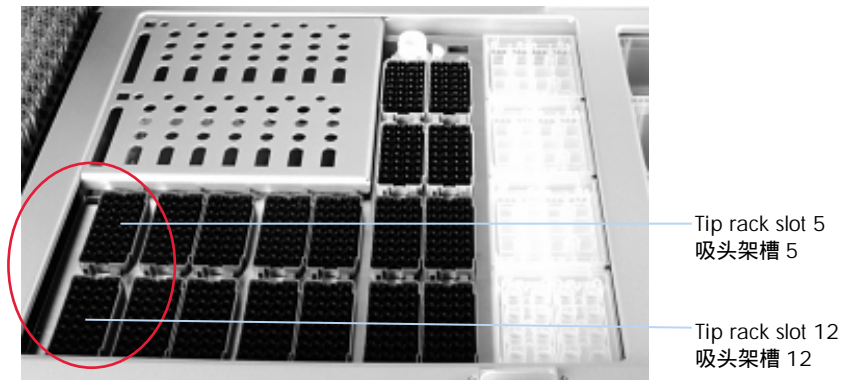
如果纯化过程需要额外乙醇，则必须由用户将其倒入一个配件料槽内，之后将该配件料槽置入“试剂和耗材”抽屉的吸头架槽 5 或 12 中。库存扫描时将会自动检测配件料槽。

If additional ethanol is required, refer to the relevant kit handbook for the volume to be used.

如果需要额外乙醇，请参考试剂盒手册获悉乙醇的使用体积。

To load the QIASymphony SP with an Accessory Trough, follow the steps below.  
如要向 QIASymphony SP 加载配件料槽，请按如下步骤操作。

1. Fill the Accessory Trough(s) with the volume of ethanol stated in the handbook of the QIASymphony Kit you are using.  
根据您所用的 QIASymphony Kit 手册所述，向配件料槽加注指定体积的乙醇。
2. Place the Accessory Trough(s) into tip rack slot 5 and/or 12.



Position of Accessory Trough(s).  
配件料槽位置。

<b>Important 重要</b>	Make sure that the Accessory Trough is properly seated in the tip rack slot otherwise an error may occur during the inventory scan. 确保配件料槽已正确安装在吸头架槽内，否则库存扫描时可能出错。
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#### 8.4.5 Unloading reagents and consumables 卸除试剂和耗材

##### 8.4.5.1 Reagent cartridges 试剂条

To remove a reagent cartridge from the “Reagents and Consumables” drawer, follow the steps below.

如要从“试剂和耗材”抽屉移除试剂条，请按如下步骤操作。

1. Open the drawer.  
打开抽屉。
2. Pull the reagent cartridge to the left and slide it out of the slot.

To avoid evaporation of reagents, we strongly recommend resealing the troughs of the reagent cartridge immediately after use. Reseal the troughs using Reuse Seal Strips provided in QIASymphony Kits. Replace screw-caps on the tubes in the enzyme rack.

为避免试剂蒸发，我们强烈建议您在使用之后，重新密封试剂条料槽。请采用 QIASymphony 试剂盒随附的可重复使用密封条来重新密封料槽。重新装上酶管架上的试管的螺帽。

For storage, remove the reagent cartridge from the reagent cartridge holder and store according to the instructions in the kit handbook. The reagent cartridge holder can then be used in combination with other kits. Store the enzyme rack according to the instructions in the kit handbook.

存储时，请从试剂条基座上取下试剂条，并按照试剂盒手册中的说明进行存储。之后，该试剂条基座可配合其他试剂盒使用。请按照试剂盒手册中的说明存储酶管架。

If the reagent cartridge is empty, remove it from the reagent cartridge holder and discard it according to your local safety regulations.

如果试剂条为空，则将其从试剂条基座上取下并按照当地的安全法规弃置。

##### 8.4.5.2 Tip racks 吸头架



Tip racks can be left in the “Reagents and Consumables” drawer. Tip racks only need to be removed in the following situations:  
吸头架可留在“试剂和耗材”抽屉内。仅在以下情形下，需要移除吸头架。

The tip racks are empty.

吸头架为空。

Maintenance will be performed (e.g., decontamination using the UV lamp).

将要进行维护（例如，使用紫外灯进行净化）。

The instrument will not be used for a long period of time.

仪器将要长时间停用。

To remove a tip rack from the QIAsymphony SP, follow the steps below.

如要从 QIAsymphony SP 上移除吸头架，请按如下步骤操作。

1. Hold the tip rack between two fingers by the recessed grips.  
将吸头架固定在嵌入式夹持器两个卡爪间。
2. Gently squeeze the tip rack together.  
轻轻地将吸头架夹在一起。
3. Remove the tip rack.
4. If you need to remove the tip racks prior to performing maintenance procedures, the tip racks can be replaced after maintenance has been performed.

#### 8.4.5.3 Unit boxes (8-Rod Covers and sample prep cartridges)

##### 单元匣（8 位磁棒套和样本制备卡夹）

Unit boxes can be left in the “Reagents and Consumables” drawer. Unit boxes only need to be removed in the following situations:

单元匣可留在“试剂和耗材”抽屉内。仅在以下情形下，需要移除单元匣。

The unit box is empty.

单元匣为空。

Maintenance will be performed (e.g., decontamination using the UV lamp).

需要进行维护操作（例如，采用紫外灯进行净化）。

To remove a unit box from the “Reagents and Consumables” drawer, follow the steps below.

如要从“试剂和耗材”抽屉移除单元匣，可按如下步骤操作。

1. Open the “Reagents and Consumables” drawer.  
打开“试剂和耗材”抽屉。

2. Grasp the unit box by its upper edge.  
握住单元匣上沿。
3. Pull it out of the drawer.  
将其拉出抽屉。
4. Replace the lids of partially used or unused unit boxes.  
更换部分使用或未用过的单元匣的外盖。
5. Empty unit boxes must be saved for collection of used sample prep cartridges and 8-Rod Covers in the “Waste” drawer.

## 8.5 Loading the “Sample” drawer 加载“样本”抽屉

Samples can be loaded into the “Sample” drawer in either primary or secondary tubes. For more information about compatible tubes, visit [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony).

样本可放于初级试管或次级试管或多孔样本架中装载到抽屉。有关兼容试管和孔板的更多信息，请访问 [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony)。

Use of tube carriers enables samples to be loaded in a variety of formats. A tube carrier for up to 24 primary tubes or tubes containing internal controls with diameters of 8–16 mm can be used with the QIASymphony SP. 试管和孔板托架的使用允许多种格式样本的装载。QIASymphony SP 可使用两种类型的样本管架：可装至多 24 个初级试管或含直径为 8–16mm 内对照的试管的试管托架。

### 8.5.1 Loading tube carriers 加载试管托架

#### 8.5.1.1 Loading samples using a tube carrier 采用试管托架加载样本

The QIASymphony SP tube carrier can accommodate up to 24 sample tubes of the following outer diameter:

QIASymphony SP 试管托架可容纳至多 24 个以下外径的样本试管：

14–16 mm (no insert required)

14–16 mm (不需要垫片)

13 mm (tube insert 1a; cat. no. 9242058)

13 mm (1a 试管垫片，目录号 9242058)

11 mm (tube insert 2a; cat. no. 9242057)

11 mm ( 2a 试管垫片 , 目录号 9242057 )

Insert Sarstedt tube 2 ml (insert 3b; cat. no. 9242083)

2 ml Insert Sarstedt 试管 ( 3b 试管垫片 , 目录号 9242083 )



Example of insert for tube carrier.

试管托架垫片实例。

<b>Important</b> <b>重要</b>	Place the tubes into the tube carrier in a way that all bar codes are oriented to the left so that they can be read by the bar code reader. 在将试管放入试管托架中时, 请确保所有条形码均朝向左侧, 以便手持式条形码阅读器可以读取。
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<b>Important</b> <b>重要</b>	Depending on the <b>Configuration Profile</b> , only bar code labeled sample tubes can be used. If other tubes are used, a batch or run cannot be defined. 根据“配置程序”, 仅可使用具有条形码标记的样本试管。如果使用其他试管, 会造成批次或运行无法定义。
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The instrument detects tube size by reading the bar code on the insert or on the tube carrier. If a tube is used that is not the default tube type for a certain insert, the user must specify the tube type when defining the sample batch. Default tubes can also be configured.

通过读取试管托架上的条形码, 仪器可以检测到试管的尺寸。如果所用试管不属于特定垫片适用的默认试管类型, 用户必须在定义样本批次时指定试管类型。默认试管类型也可进行配置。

### 8.5.1.2 Inserting samples using a tube carrier

#### 使用试管托架插入样本

1. Open the "Sample" drawer by pulling the door toward you.

向自己所在的方向拉动抽屉门，打开“样本”抽屉。

Five slots are available: The first 4 slots can accommodate tube carriers containing sample tubes; the fifth slot "A" accommodates a tube carrier containing internal control.

共有五个槽可用：前 4 个槽可容纳含有样本试管的试管托架；第 5 个槽“A”可容纳含有内参的试管托架。

The status of each slot is shown by LEDs located behind the stop line. The LEDs may be illuminated in green, orange, or red.

各个槽的状态通过位于停止线后方的 LED 灯表示。LED 灯可点亮为绿色、橙色或红色。

Green — slot is free and ready for loading

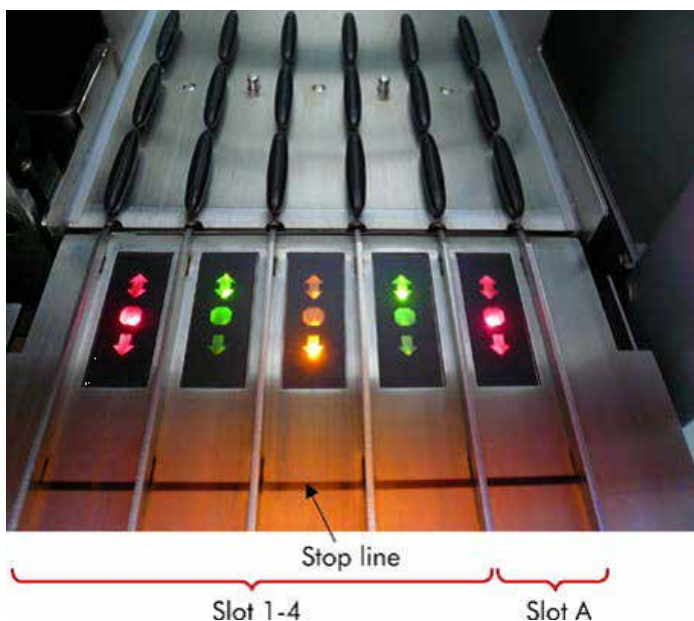
Orange — tube carrier is loaded

Red — slot is currently locked

绿色 - 槽空闲，可直接加载

橙色 - 已加载试管托架

红色 - 槽目前被锁定



Examples of slot status LED illumination.

槽状态 LED 灯点亮实例。

2. Gently slide the tube carrier into the appropriate slot. Insert up to the stop line, and wait until the bar code reader has moved forward.

轻轻地 将 试管托架 滑入 对应 的槽内。将 试管托架 直接 插入 到 停止线 位置，等待 条形码 阅读器 向前 移动。



Sliding a tube carrier into the appropriate slot.  
将 试管托架 滑入 对应 的槽内。



Bar code reader (laser)  
条形码阅读器 (激光)

Spacer  
垫片

Locations of bar code reader and spacer.  
条形码阅读器 和 垫片 的位置。

3. As soon as the bar code reader is in position, the slot unlocks and the green LED starts to flash. Slide the carrier into the slot until it locks.

条形码阅读器 一旦 就位，槽 解锁，同时 绿色 LED 灯 开始 闪烁。将 托架 滑入 槽内，直至 其 锁定。

4. The bar code reader reads bar codes on the carrier, inserts, and corresponding sample tubes (if bar coded). Upon successful loading, the LED changes from green to orange.  
条形码阅读器读取托架、垫片及对应的样本试管上的条形码（如果有条形码标记）。加载成功后，LED 灯从绿色变为橙色。
5. The bar code reader returns to the home position.  
条形码阅读器返回到原点位置。
6. To add more sample tubes in different slots, follow procedure as described in this section. Otherwise close the “Sample” drawer. 为了向不同的槽内加入更多的样本试管，请遵照本节所述操作。否则，请关闭“样本”抽屉。

<b>Important 重要</b>	<p>Be sure to support the tube carrier with your second hand during the loading process. Otherwise, there is a risk of handle breakage.</p> <p>在加载过程中，请务必用您的另一只手支持试管托架。否则，则存在把手断裂的风险。</p>
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<b>Important 重要</b>	<p>Make sure to slide the carrier smoothly into the slot otherwise an error may occur.</p> <p>务必将托架平顺地滑入到槽中，否则可能出错。</p>
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<b>Important 重要</b>	<p>Only a tube carrier containing internal control can be loaded into “Slot A”. Tube carriers containing samples must be loaded into “Slot 1”, “Slot 2”, “Slot 3”, or “Slot 4”.</p> <p>只有含有内参的试管托架可加载到“槽 A”内。含有样本的试管托架必须加载到“槽 1”、“槽 2”、“槽 3”或“槽 4”中。</p>
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<b>Important 重要</b>	<p>If you need to load two samples with the same bar code/ID in the same tube carrier, do not place them side by side. Otherwise an error will occur.</p> <p>如果您需要将两个具有相同条形码/ID 的样本加载到相同的试管托架中，则不要将它们并排放在一起，否则会出错。</p>
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<b>Important 重要</b>	<p>If you are using sample tubes that are not labeled with bar codes and that are in different inserts, use either one insert type per tube carrier or leave at least one position empty between different types of insert.</p> <p>如果您使用不带条形码标记、采用不同的垫片的样本试管，可以每个试管托架采用一种垫片类型，或者在不同类型垫片之间至少留空一个位置。</p>
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<b>Important 重要</b>	<p>If you are using sample tubes that are not labeled with bar codes and the QIASymphony SP has a configuration other than configuration 3, tubes containing smaller volumes of liquid or clear liquids may not be detected. In this case, use a blank bar code label to enable detection of the sample tube.</p> <p>如果您使用不带条形码标记的样本试管且 QIASymphony SP 采用配置 3 之外的配置，则含有的液体体积较少且透明的试管可能无法检测到。如出现这种情况，可使用空白的条形码标签，以便能检测到样本试管。</p>
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### 8.5.1.3 Continuous loading 连续加载

It is also possible to load and queue additional samples when a run is already in progress. In this mode, you can only assign Assay Control Sets that are compatible with the currently loaded reagent cartridge.

运行进行过程中，您也可加载并排队更多的样本。在此模式下，您只可分配与目前加载的试剂条兼容的检测对照集。

Continuous loading on the QIASymphony SP is possible for up to 96 samples in any number of batches, provided that the consumables drawer is fully loaded before commencing the first batch.

QIASymphony SP 连续加载至多可在任意数量批次中加载 96 个样本，前提是开始第一个批次之前耗材抽屉即已完全加载。

After loading the samples, the system allows the user to correct bar code reading errors, change labware, assign Assay Control Sets, and define the elution slot and volume. 加载样本后，系统允许用户校正条形码读取误差、更改器具、分配检测参数集及定义洗脱物槽和体积。

Before starting a run with continuous loading, ensure that: 开始连续加载运行前，请确保：

Additional reagents that are required (e.g., ethanol, buffer in 60 ml buffer bottle) are loaded.

已加载了所需的附加试剂（例如，乙醇、盛放在 60 ml 缓冲液瓶中的缓冲液）。

The elution rack is correctly positioned in the “Eluate” drawer before setting up a batch. If you need to assign an elution slot during batch setup (while a run is active), only the slots that already contain racks may be used.

设置批次之前，已将洗脱架正确放置在“洗脱物”抽屉中。

Elution racks are set up before a run is started. This ensures that multiple scans of the “Eluate” drawer are not performed. Every time a scan is performed, the current run is paused.

运行开始前，已设置洗脱架。此步骤可确保您不需进行多次“洗脱物”抽屉扫描。每次完成扫描后，当前的运行都会暂停。

#### 8.5.1.4 Unloading a tube carrier 卸除试管托架

If the tube carrier slot is not locked (LED is not illuminated red), the tube carrier can simply be removed from the slot. The tube carrier can be removed as soon as the samples have been transferred.

如果试管托架槽未锁定（LED 灯未点亮为红色），则可直接从槽上移除试管托架。转移样本后，即可立即移除试管托架。

Depending on the batch status, different actions can be carried out after removing the tube carrier.

根据具体的批次状态，在移除试管托架后可采取不同的操作。

#### 8.5.1.5 Removing a batch loaded in the tube carrier 移除试管托架中加载的批次

If samples are loaded in a tube carrier, the batch can be removed.  
如果样本加载到试管托架中，可以移除批次。

Status 状态	Action 操作	Description 描述
QUEUED, STOPPED or COMPLETED 排队、停止或完成	Simply remove the tube carrier from the corresponding slot. 直接从对应的槽中移除试管托架。	Tube carrier was not removed before stop or completion. 停止或完成前，未移除试管托架。
STOPPED or COMPLETED 停止或完成		Tube carrier was removed before end of batch. 批次结束前，移除试管托架。

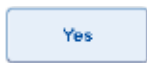
To remove a batch loaded in the tube carrier, follow the steps below.  
如要移除试管托架中加载的批次，请按如下步骤操作。

1. Press the **SP Batch** button in the **Sample Preparation/Overview** screen.



A message will appear that asks whether you want to remove the batch.  
点击“样本制备/概览”界面内的 SP 批次按钮。随即出现一条消息，询问您是否确定要移除该批次。





2. Press **Yes** to confirm.  
点击“是”进行确认。

### 8.5.1.6 Loading internal controls

#### 加载内参

If a protocol requires the use of an internal control, the internal control to be used is defined in the corresponding Assay Control Set. Assigning an Assay Control Set to a sample not only specifies which protocol should be used but also which internal control should be added to the sample. 如果某个程序需要使用内参，则通过相应的检测对照集定义所用的内参。在将检测对照集分配给样本时，不仅要指定所应采用的程序，还应指定要加入到样本中的内参。

The QIASymphony SP supports the use of internal controls only in combination with samples that are loaded in a tube carrier.

QIASymphony SP 仅支持可与加载到试管托架中的样本结合使用的内参。

<b>Important</b> <b>重要</b>	Internal controls must be loaded via a tube carrier in sample "Slot A". 内参必须通过样本“槽 A”内的试管托架加载。
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<b>Important</b> <b>重要</b>	Do not load internal controls into "Slots 1-4". 请勿将内参加载到“槽 1-4”中。
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Eight different internal controls can be used per batch of 24 samples and up to 24 different internal controls can be used for one run. Tubes containing internal control must be placed into the appropriate insert for the tube type before loading into the tube carrier. 每个 24 样本的批次可使用 8 个不同的内参，一轮运行最多可使用 24 个不同的内参。在将内参加载到试管托架中之前，必须将含有内参的试管放入到对应的试管类型的垫片内。

Loading of the required internal controls for ordered batch(es) is validated before run start.

运行开始前，验证等待批次所需的内参是否加载。

If the tubes containing internal control are bar code labeled and identification of the tubes is defined in an Assay Control Set, the QIASymphony SP automatically detects which internal control is located in each position.

如果含有内参的试管采用条形码标记，且试管的标识符已在检测对照集中定义，则 QIASymphony SP 会自动检测位于各个位置内的内参。

If the tubes are not bar code labeled, information about the internal control must be entered manually.

如果试管未采用条形码标记，则必须手动输入内参相关的信息。

After insertion of the tube carrier into “Slot A”, follow the steps below to enter information about the internal control.

在将试管托架插入到“槽 A”内后，请遵照如下步骤输入内参相关的信息。

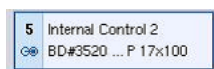


1. Press the **IC** button to check or modify the internal controls.

The **Internal Controls** screen appears.

点击“IC”按钮检查或修改内参。

随即出现“内参”界面。



2. Select the position that needs an internal control to be manually assigned by pressing the button.

选择需要通过点击按钮手动分配内参的位置。

选择需要通过点击按钮手动分配内参的位置。



3. Select the internal control in the **Internal controls:** list.

从“内参”列表中选择内参。



4. Press **OK** to assign internal controls to the selected positions.

点击“OK”为选中的位置分配内参。





5. Press **OK** to confirm the overall assignments of internal control.



Internal controls are ordered into 3 groups:

内参可以分为三个组别排序：

Optional 可选	All internal controls known to the instrument that are not categorized as “Required” or “In use” appear under “Optional”. 所有仪器能够确定但不能归类为“必需”或在用的内参，都显示在“可选”下。
Required 必需	Batch(es) is(are) queued. The QIAAsymphony SP knows which internal controls are required to run the queued batches. The required internal controls are not detected automatically and have to be assigned to the detected positions. 正在排队的批次。QIAAsymphony SP 可确定到哪些内参是运行排队的批次所需的。所需的内参不会自动检测到，必需分配到检测的位置。
In use 在用	The QIAAsymphony SP either has automatically detected an internal control or it was manually assigned to a particular position in the fifth tube carrier. These internal controls are listed under the category “In use”. QIAAsymphony SP 可以自动检测内参，也可手动分配到第五个试管托架上的某个位置。这些内参列在“在用”类别下。

<b>Important</b> <b>重要</b>	<p>If the internal control was labeled with a bar code but the bar code was not correctly read, the associated position button becomes yellow. To continue, the internal control has to be manually assigned using the internal controls displayed in the <b>Internal controls:</b> list. If the internal control was not labeled with a bar code but the QIASymphony SP detected that a tube was present, <b>Unknown IC</b> is displayed in the corresponding position. The internal control has to be manually assigned using the internal controls displayed in the <b>Internal controls:</b> list.</p> <p>如果内参有条形码标记，但无法正确读取条形码，相应的位置按钮会变为黄色。如要继续，必须使用“内参”中显示的内参手动分配内参。如果内参无条形码标记，但 QIASymphony SP 检测到存在试管，则会在相应的位置显示“未知 IC”。必须使用“内参”中显示的内参手动分配内参。</p>
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<b>Important</b> <b>重要</b>	<p>Although you can leave this screen without manually assigning the positions labeled <b>Unknown IC</b>, be sure to assign all required internal controls before starting a run; otherwise the run cannot be started. 尽管您可以不手动分配“未知 IC”标记的位置，直接离开本界面，但请在开始运行前务必分配所有所需的内参；否则，运行可能无法启动。</p>
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### 8.5.1.7 Unloading internal controls 卸除内参

Internal controls in a tube carrier can be removed from the QIASymphony SP when the carrier slot is unlocked.

托架槽解锁后，可以从 QIASymphony SP 中卸除试管托架内的内参。

If batches are running and you need to load additional internal controls, press the **IC** button to unlock the carrier “Slot A”.

如果目前有批次正在运行且您需要额外加载内参，则请点击 IC 按钮解锁托架的“槽 A”。

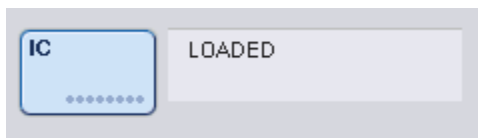
If the QIASymphony SP does not need to access the tube carrier in “Slot A”, the internal controls can be unloaded.

如果 QIASymphony SP 不需要访问“槽 A”内的试管托架，则可卸除内参。

Remove the carrier with internal controls from “Slot A” by gently sliding it out of the “Sample” drawer.

将托架轻轻地滑出“样本”抽屉，从而将带有内参的托架从“槽 A”移除。

The status of the internal controls changes from **LOADED** to **ON HOLD**. The QIASymphony SP will retain the information about the internal controls provided earlier. 内参的状态从“加载”切换为“保温”。QIASymphony SP 仍会保留之前提供的内参的信息。



Under the described conditions, **ON HOLD** would be visible where **LOADED** appears in the image above.

在上述条件下，在上图显示“加载”的位置会显示“保温”。

#### 8.5.1.8 Loading internal controls during a run 运行期间加载内参

After unloading the tube carrier containing the internal control, the tube carrier containing a new internal control has to be inserted again. Define internal control(s) as described in Section 8.5.1.6.

卸除含有内参的试管托架后，必须再次插入含有新内参的试管托架。请根据第 8.5.1.6 节所述定义内参。

For more information, refer to Section 2.20.4, “Loading internal controls during a run”, of the *QIASymphony SP/AS User Manual — Operating the QIASymphony SP*.

更多信息请参阅“*QIASymphony SP/AS 用户手册 - QIASymphony SP 操作*”之中的第 2.20.4 节“运行期间加载内参”。

#### 8.5.2 Loading the plate carrier 加载孔板托架

The plate carrier can also be used for sample input. For more information, refer to the *QIASymphony SP/AS User Manual — General Description*. If you intend to use the plate carrier, contact QIAGEN Technical Services. 孔板托架也可用于样本输入。如需了解更多信息，请参阅“*QIASymphony SP/AS 用户手册 - 概述*”。如果您有意使用孔板托架，请联系 QIAGEN 技术服务部。

## 8.6 Performing inventory scans (SP) 进行库存扫描(SP)

An inventory scan of each drawer of the QIASymphony SP must be performed before a sample preparation protocol can be run. The QIASymphony SP uses a laser to check the type and number of consumables, and the type and location of adapters loaded in each drawer. A bar code detection system recognizes and scans 1D or 2D bar codes (e.g., on the reagent cartridge). The laser and bar code camera are integrated in the robotic arm. This ensures that positions over the whole worktable can be scanned. The inventory scan is drawer-specific. This means that only the drawer that has been opened will be scanned for changes. 在运行一个样本制备程序之前，必须对 QIASymphony SP 的每个抽屉执行一次库存扫描。QIASymphony SP 利用激光检查耗材的类型和数量，以及装载到每个抽屉中的适配器的类型和位置。条形码检测系统可识别和扫描一维或二维条形码（如，试剂条上的条形码）。激光和条形码相机均集成到机械臂中。这确保了整个工作台的全部方位均可被扫描到。库存扫描是特定用于抽屉的扫描。这意味着仅将对已被打开的抽屉扫描变化。

### 8.6.1 Inventory scan of the “Reagents and Consumables” drawer “试剂和耗材”抽屉的库存扫描

The inventory scan of the “Reagents and Consumables” drawer is divided into 2 main parts, each with several subparts.

“试剂和耗材”的库存扫描分成 2 个主要部分进行，其中每个部分又分成几个子部分。

#### 8.6.1.1 Laser scan — reagent cartridge 激光扫描 – 试剂条

Reagent cartridge slots are scanned. The instrument will check first for sealed troughs in the respective reagent cartridge.

如果 QIASymphony SP 检测到了试剂条槽，则仪器将首先检测各个试剂条中的密封试剂槽。

<b>Important</b> <b>重要</b>	The inventory scan is not able to detect whether the piercing lid is in place on top of the reagent cartridge or not. If the piercing lid is missing, the QIASymphony SP will detect an error during first use of the reagent cartridge and processing of the corresponding sample batch will be canceled. 库存扫描不会检测穿孔盖是否放置到试剂条的顶端。如果穿孔盖缺失，首次使用试剂条时 QIASymphony SP 将会检测到错误，并将取消相应样本批的处理。
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<b>Important</b> <b>重要</b>	Ensure that all 2D bar codes are accessible by the sensor. 请确保所有的二维条形码可为传感器识别。
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2D bar codes on reagent troughs, the magnetic-particle trough, and the enzyme rack are checked. In addition, the piercing status of the reagent cartridge is checked.  
检查试剂料槽、磁珠料槽和酶架上的二维条形码。另外，还检查试剂条的穿孔状态。



2D bar codes.  
二维条形码。

If the reagent cartridge is sealed and not pierced, the liquid level of all reagents in the reagent cartridge is set to the original value. An additional liquid-level check will not be performed.

若试剂条密封且未被穿孔，则试剂条中的所有试剂液位均设定为初始值。将不会另行检测液位。

Both reagent cartridge slots are scanned.

扫描试剂条槽。

<b>Important</b> <b>重要</b>	Do not mix enzyme racks, buffer, or magnetic-particle troughs from different reagent cartridges. 请勿混淆不同试剂条中的酶架、缓冲剂或磁珠料槽。
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#### 8.6.1.2 Laser scan — tip rack slots

##### 激光扫描 - 吸头架槽

All 18 tip rack slots are scanned to determine the type of tip rack loaded.

扫描所有 18 个吸头架槽以确定装载的吸头架类型。

All tip rack slots in which a tip rack was detected are scanned to determine the number of tips. If a tip is detected in the first and last position of the tip rack, the tip rack will be categorized as full. If the first or last tip is missing, a full scan will be performed to determine the number of tips in the tip rack.

扫描检测到的吸头架中的所有吸头架槽，检测吸头数目。如果在吸头架的首个和末个位置检测到了吸头，则认为吸头架已装满吸头。如果首个或末个吸头缺失，将执行一次完全扫描，检测吸头架中的吸头数目。

### 8.6.1.3 Laser scan — unit boxes 激光扫描 – 单元匣

The unit box slots are scanned to detect the presence of unit boxes in the 4 slots.

扫描单元匣槽，检测 4 个槽内是否存在单元匣。

Afterwards, the type (8-Rod Cover or sample prep cartridge) and number of consumables are determined.

此后，检测耗材的类型（8 位磁棒套或样本制备卡夹卡夹）和数目。

### 8.6.1.4 Liquid-level scan of detected reagents 缓冲液瓶液位扫描

This scan is only performed if the liquid level is not known (e.g., for a partially used reagent cartridge).

此项扫描仅在所检测试剂的液位未知的情况下进行（如，对于部分使用的试剂条）。

Liquid-level scan of detected reagents.

所检测试剂的液位扫描。

Liquid-level check of the buffer bottle (if detected).

缓冲液瓶的液位检查（如果检测得到）。

Liquid-level check of the Accessory Trough (if detected).

配件料槽的液位检查（如果检测得到）。

<b>Important</b> <b>重要</b>	The inventory scan will only enable detection of the liquid level of open and recognized vessels. 此项扫描仅在所检测试剂的液位未知的情况下进行（如，对于部分使用的试剂条）。
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<b>Important 重要</b>	<p>These checks use 1500 µl and 200 µl filter-tips. If insufficient tips are available or if one of the tip types is missing, the inventory scan will be canceled and queued sample batches cannot be started.</p> <p>这些检查使用 1500 µl 和 200 µl 的带滤芯吸头。如果可用的吸头不充足，或其中一个吸头类型缺失，则库存扫描将中止并且排队样本批也无法启动。</p>
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### 8.6.1.5 Partial inventory scan 部分库存扫描

If you need to repeat an inventory scan for the “Reagents and Consumables” drawer (e.g., if a change has been made on the worktable), you can perform a partial inventory scan.

如果您需要对“试剂和耗材”抽屉重复进行一次库存扫描（如，若工作台发生了变更），则您可选择部分库存扫描。

Do you want to start the inventory scan on "Reagents and Consumables drawer"?

Tip Racks: Yes No

Unit Boxes: Yes No

Reagents: Yes No

Buffer Bottle (optional): Yes No

Accessory Trough (optional): Yes No

Scan No, nothing changed Scan later

## 8.6.2 Inventory scan of the “Waste” drawer

### “废弃物”抽屉的库存扫描

The inventory scan of the “Waste” drawer consists of a laser scan. It does not perform 2D bar code scans, liquid-level detection, or checks of the liquid waste container. It is therefore important that the user checks the liquid waste container and empties it before starting a batch.

“废弃物”抽屉的库存扫描由激光扫描组成。它并不执行二维条形码扫描，检测液位或检查废液容器。因此，用户在启动一个批之前检测并清空废液容器相当重要。

#### 8.6.2.1 Laser scan

##### 激光扫描

The tip park station slot is scanned. This checks that the tip park station is mounted.

扫描吸头置台槽。这项扫描检查吸头置台是否安装。

The tip chute slot is scanned. This checks that the tip chute is installed.

扫描吸头斜槽。检查吸头斜槽是否安装。

The unit box slots are scanned. First, each of the 4 unit box slots is scanned to detect whether a unit box is in the slot. Afterwards, the content of each box is determined (e.g., amount and type of consumables in each box).

扫描单元匣槽。首先，扫描这 4 个单元匣槽中的每一个，检测单元匣是否位于槽内。在此之后，检查每个匣内的内容物（如，每个匣内的耗材数量和类型）。

## 8.6.3 Inventory scan of the “Eluate” drawer

### “洗脱物”抽屉的库存扫描

The QIASymphony SP checks the elution slots to make sure that selected elution slots contain an elution rack. It is possible to select the elution slots on which the bar codes of adapters will be scanned in the **Process SP 1** tab of the **Configuration** menu (i.e., none or 1–4).

QIASymphony SP 将检查洗脱槽以确保选中洗脱槽加载了洗脱架。在“配置”菜单的“处理 SP1”标签中可以选择将对适配器条形码进行扫描的洗脱槽（即，无或 1-4）。

If the QIASymphony SP detects a discrepancy between the expected and actual elution rack(s) that are loaded in the “Eluate” drawer, a message appears in the touchscreen prompting the user to correct the problem. Open the “Eluate” drawer and place the elution rack(s) onto the correct position(s) or edit the slot/rack assignment in the touchscreen.

如果 QIASymphony SP 检测到预期和实际在“洗脱物”抽屉中加载的洗脱架不符，触摸屏上会显示一条信息提示用户纠正此问题。打开“洗脱物”抽屉，将洗脱架放置到位，或在触摸屏上编辑槽/架分配。

A message appears in the following situations:

以下情形时将出现信息提示：

The detected bar code and the adapter bar code specified in the labware file are different.

检测到的条形码与器具文件中给出的适配器条形码不同。

A bar code is detected but the selected labware file does not specify an adapter bar code.

检测到条形码但选中的器具文件并未给出某个适配器条形码。

No bar code is detected, but the selected labware file specifies an adapter bar code that is required.

未检测到条形码，但选中器具文件给出了需要的某个适配器条形码。

<b>Important</b> <b>重要</b>	The QIASymphony SP only detects whether an elution slot is occupied by an elution rack or adapter and is not able to identify the elution rack type on the respective elution slot.  QIASymphony SP 只检测洗脱槽是否装载了洗脱架或适配器，并不能识别各个洗脱槽上的洗脱架类型。
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## 8.7 Starting, pausing, resuming, and stopping a run 启动、暂停、恢复和停止运行

### 8.7.1 Starting a run 启动运行

As soon as a batch is queued, the **Run** button appears.

某个批次一旦排队，即会出现“**运行**”按钮。

When you have finished defining the samples you want to process, press the **Run** button. The software will then validate the batches.

定义您想要处理的样本后，点击“**运行**”按钮。随后，软件将会开始验证批次。

### 8.7.2 Pausing a run 暂停运行

A run can be paused by pressing the **Pause SP** button in the **Sample Preparation** tab. If a run is paused, the command being processed is completed before the run pauses. All running batches will be paused.

点击“样本制备”标签下的“暂停 SP”按钮，可以暂停运行。如果运行暂停，则会在暂停前先完成当前正在处理的命令。所有正在运行的批次均会暂停。

If the run is paused, two options are available: the run can be resumed or stopped.

运行暂停后，有两个选项可用：恢复或停止。

<b>Important</b> <b>重要</b>	Pausing a run interrupts the sample preparation procedure. Only pause a run in an emergency. 暂停运行会中断样本制备操作。仅在紧急情况下需要暂停运行。
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<b>Important</b> <b>重要</b>	Pausing a run results in the processed samples being flagged as “unclear”. 暂停运行会使处理的样本会被标上“不定”标签。
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### 8.7.3 Resuming a run 恢复运行

To resume a run, press the **Continue SP** button. If the run was paused, the samples will be flagged as “unclear”.

如要恢复运行，可点击“继续 SP”按钮。如果运行暂停，样本会被标上“不定”标签。

### 8.7.4 Stopping a run 停止运行

Press the **Stop SP** button to stop the run. All batches currently being processed will be stopped. Other batches with the status **QUEUED** can be processed in another run after following the cleanup procedure.

可点击“停止 SP”按钮停止运行。所有当前正在处理的批次均会停止。在进行完之后的净化操作后，其他状态为“等待”的批次将会在下一轮运行中处理。

If the run is stopped, all processed samples are flagged with "invalid". It is not possible to process these samples further or to resume the run.

如果某个运行停止，则所有处理过的样本均会被标记为“无效”。在这种情况下，这些样本不可继续处理或恢复运行。

#### 8.7.4.1 Canceled run 取消运行

After stopping a run or if the run stops due to an error, the "S" button is flashing (see Section 5.1.1.2). Press the "S" button to display the warning or error message. This message gives the hint to perform the cleanup procedure in the **Maintenance SP** screen.

主动停止运行或运行因错误停止后，“S”按钮会闪烁（参见第 5.1.1.2 节）。点击“S”按钮，可以显示相关的警告和错误消息。此类消息会向您提供如何在“**维护 SP**”界面进行净化操作程序的提示消息。

<b>Important</b> <b>重要</b>	After successful cleanup, it is necessary to empty all slot positions in the "Sample" and "Eluate" drawers. New runs can then be defined and started. 成功净化后，必须清空“样本”和“洗脱物”抽屉内的所有槽位置。之后才可定义和启动新的运行。
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## 8.8 End of batch processing or run 终止批次处理或运行

<b>Important</b> <b>重要</b>	If eluates in a completed batch or stopped run have been transferred to an elution rack that is only for eluates from this batch, the elution rack may be removed when batch processing is finished. 如果已完成批次或停止的运行之中的洗脱物转移到此批次洗脱物专用的洗脱架上，在批次处理完成后可能需要移除该洗脱架。
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1. Unload elution rack(s).  
卸除洗脱架。
2. Unload the tube carriers containing processed samples.  
卸除含有处理的样本的试管托架。
3. **Optional:** Unload internal controls (if not required for the next sample batch).  
**可选：**卸除内参（如果下一样本批次不需要）。
4. Remove the reagent cartridge (if it is not required for the next sample batch). Seal the troughs with Reuse Seal Strips and store according to the instructions in the kit handbook.（如果下一样本批次不需要）。采用可重复使用密封条密封料槽，然后根据试剂盒手册中的说明存储。

## 8.9 End of working day 工作日收工

1. Empty the liquid waste container.  
清空废液容器。
2. Unload the unit boxes from waste drawer.  
从废弃物抽屉卸除单元匣。
3. Unload all elution racks.  
卸除所有洗脱架。
4. Remove consumables, reagent cartridges, buffer bottle, and Accessory Troughs.  
移除耗材、试剂条、缓冲液瓶和配件料槽。
5. Perform maintenance procedures described in Section 9 of the *QIASymphony SP/AS User Manual — General Description*.

For more information about unloading the reagents and consumables, see Section 8.4.5.

有关卸除试剂和耗材的更多信息，请参阅第 8.4.5 节。

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<b>Important</b> <b>重要</b>	<p>Be sure to seal partially used reagent cartridges with Reuse Seal Strips. Store partially used reagent cartridges according to the instructions in the kit handbook.</p> <p>务必采用可重复使用密封条密封部分使用的试剂条。请根据试剂盒手册中的说明，存储部分使用的试剂条。</p>
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## 9 QIASymphony SP Run Definitions


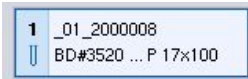

### QIASymphony SP 运行定义

This section describes how to set up and configure a sample preparation run  
本章描述如何设置和配置样本制备运行。

#### 9.1 Configuring a sample type 配置样本类型

<b>Important</b> <b>重要</b>	By default, the sample type is "Sample". If your QIASymphony SP is not connected to a QIASymphony AS, ignore this section. 默认情况下，样本类型为“样本”。如果您的 QIASymphony SP 未连接到 QIASymphony AS，可忽略本章内容。
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To change a sample to a positive extraction control (EC+) or negative extraction control (EC-), follow the steps below to ensure correct processing on the QIASymphony AS.  
如要将样本类型更改为阳性提取对照(EC+)或阴性提取对照(EC-)，为确保能在 QIASymphony AS 上正确处理，请按如下步骤操作。

- 
- 
- 
1. Press **ID/Type** in the **Sample Preparation/Batch/Define Sample** screen.  
点击“**样本制备/批次/定义样本**”界面内的“**ID/类型**”。
  2. Select the samples for which the sample type shall be changed by pressing the corresponding buttons.  
点击相应的按钮，选择要更改样本类型的样本。
  3. Press **EC+** or **EC-** to change the sample type from "Sample" to positive extraction control (EC+) or negative extraction control (EC-). **EC+EC- 阳性对照(+)或阴性对照(-)**。

<b>Important</b> <b>重要</b>	Sample types are saved in the rack file for the corresponding elution rack. It is not possible to change the sample types later. 样本类型保存在对应的洗脱架的管架文件中。之后将无法再更改样本类型。
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## 9.2 Use of virtual bar codes 使用虚拟条形码

Depending on the instrument configuration, the QIAsymphony SP can generate unique, virtual bar codes for tubes that are not labeled with physical bar codes. The nomenclature of the bar code is: “\_Position number\_Unique batch ID” (e.g., \_01\_1000031). 根据具体的仪器配置，QIAsymphony SP 可以为不具有实体条形码标记的试管生成一个唯一的虚拟条形码。这一类条形码的命名规则为 “\_位置编号\_唯一的批次 ID”（例如，\_01\_1000031）。

If your software is configured in such a way that virtual bar codes are generated and assigned to sample tubes that are not bar code labeled, you do not need to take further action.

如果您的软件配置允许为不带有条形码标记的样本试管生成并分配虚拟条形码，您不需要采取任何后续操作。



Sample tubes without  
bar code labels in  
position 1-16  
1-16 位置为不带有条  
形码标签的样本试  
管。

## 9.3 Defining a batch/run (queuing) 定义批次/运行（排队）

### 9.3.1 Samples loaded in the tube carrier 载入试管托架中的样本

#### 9.3.1.1 Assigning different Assay Control Sets to a sample batch 为样本批次分配不同的检测对照集

To assign samples to a batch, follow the steps in sections “Without work list” or “**With work list**”, below.

为各批次分配样本时，请按照下述“带工作列表”或“无工作列表”部分描述的步骤操作。

#### **Without** *work* **list** **无工作列表**

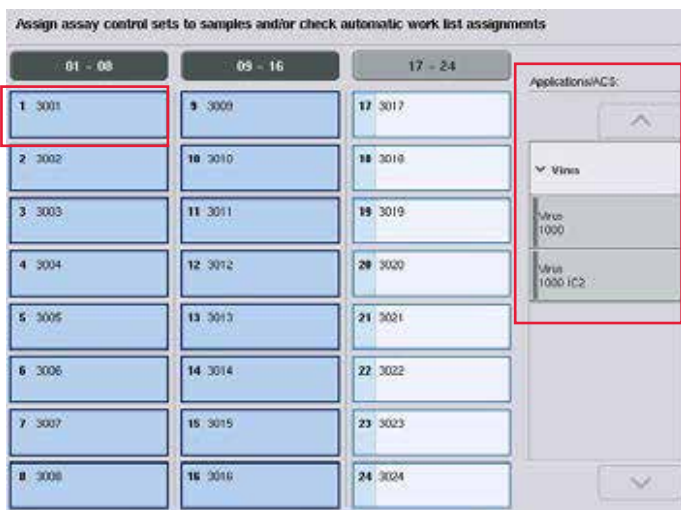
1. After loading a tube carrier, press the **SP Batch** button  
加载试管托架后，点击“SP 批次”按钮。



2. Enter or change Sample IDs or labware if necessary. Press **Next** when done.  
根据需要，输入或更改样本 ID 或器具。完成之后，点击“下一步”。
3. Select the samples that should be processed with a particular Assay Control Set by pressing the position buttons.  
点击位置按钮，选择希望通过特定的检测对照集处理的样本。
4. Select the application in the **Application/ACS** list that the Assay Control Set appears in. The list shows all available Assay Control Sets for the selected application.

在出现“检测对照集”的“应用程序/ACS”列表中选择应用程序。该列表显示有选定应用程序的所有可选的检测对照集。

5. Select the Assay Control Set that should be used with the selected samples.  
选择选定样本所要使用的检测对照集。
6. As soon as the first Assay Control Set has been selected, only Assay Control Sets that can be run with that protocol are displayed.  
选定第一组检测对照集后，只有程序可运行的检测对照集才会显示。



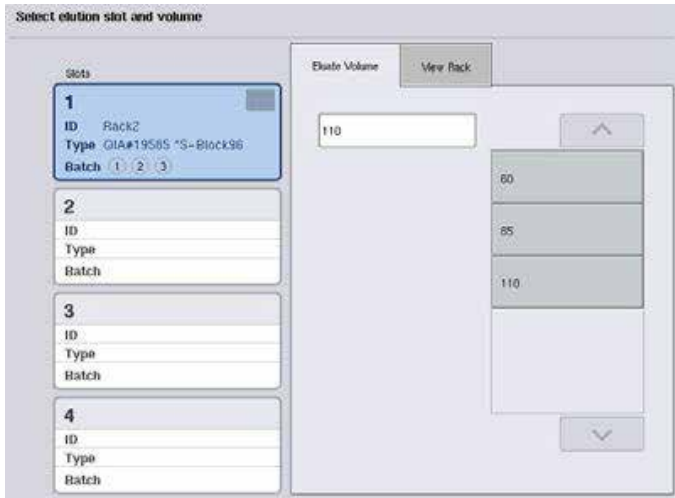
7. Repeat steps 2–5 to assign Assay Control Sets to the other samples.  
重复 2-5 步，为其他样本分配检测对照集。

<b>Important</b> <b>重要</b>	Only one protocol can be run within a batch of 24 samples. 仅有一项程序可运行 24 个样本的批次。
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8. Press **Next** to continue with the batch definition workflow.  
点击“下一步”，继续进行批次定义工作流程。

9. Select the elution slot for the batch to be defined by pressing the corresponding slot button.  
点击对应的槽按钮，选择待定义批次的洗脱槽。



10. To overwrite the default elution volume, select the required elution volume from the list by pressing the appropriate button.

如要覆盖默认的洗脱体积，则点击相应的按钮，从列表中选择所需的洗脱体积。

11. Press **Queue** or **Finish** to finish the batch definition workflow.

### With work list

#### 带工作列表

1. If all sample tubes have been correctly identified, and if there are no unidentified samples or duplicate entries (depends on the software configuration of the QIASymphony SP), press the **Next** button to continue with the batch definition process.

如果所有样本试管均已正确识别，无未能识别的样本或重复的条目（具体取决于 QIASymphony SP 的软件配置），则点击“下一步”继续进行批次定义流程。



- The QIASymphony SP checks whether there are any work list assignments for the loaded samples of the batch being defined.

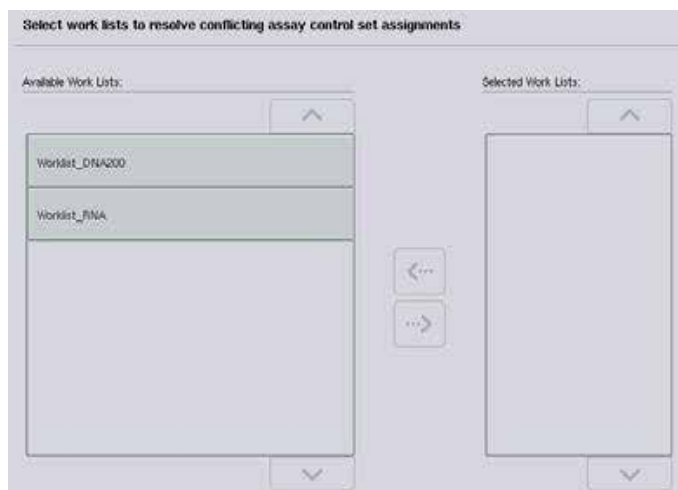
QIASymphony SP 会检查正在定义的批次所加载的样本是否分配有工作列表。

- Select the work lists that you would like to use for defining the batch. To select a work list, press its button in the list of **Available Work Lists**, then press the arrow button in the right direction. The work list will then move to the **Selected Work Lists** panel.

选择您希望用来定义批次的工作列表。选择工作列表时，请点击“可用工作列表”中的列表按钮，然后点击向右的箭头按钮。工作列表随后会跳转至“选中的工作列表”面板。


<p><b>Important</b> <b>重要</b></p>	<p>When a work list has been selected, only work lists that are compatible with the selected work list are displayed in the list of available work lists..</p> <p>选中某一工作列表后，在可用工作列表中仅会显示与选中的工作列表兼容的工作列表。</p>
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<p><b>Important</b> <b>重要</b></p>	<p>To deselect a work list, select it in the <b>Selected Work Lists</b> field and then press the arrow button in the left direction. The work list will then move to the <b>Available Work Lists</b> panel.</p> <p>如要取消选择某一工作列表，可在“选中的工作列表”字段将其选中，然后点击向左的箭头按钮。工作列表随后会跳转至“可用工作列表”面板。</p>
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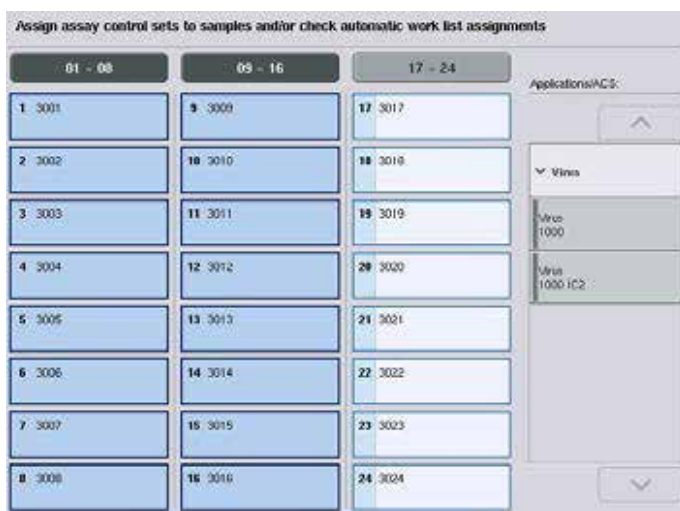
- Press **Next** to continue.

点击“下一步”继续。

- For samples associated with a work list, the Assay Control Sets defined in the work list are automatically assigned. These samples display the indicator  in the lower right corner. To

process any samples that are not associated with a work list, Assay Control Sets must be assigned.

对于与工作列表相关的样本，系统会自动分配在工作列表中定义的检测对照集。此类样本会在右下角显示指示符号。如要处理与工作列表无关的任何样本，则必须分配检测对照集。



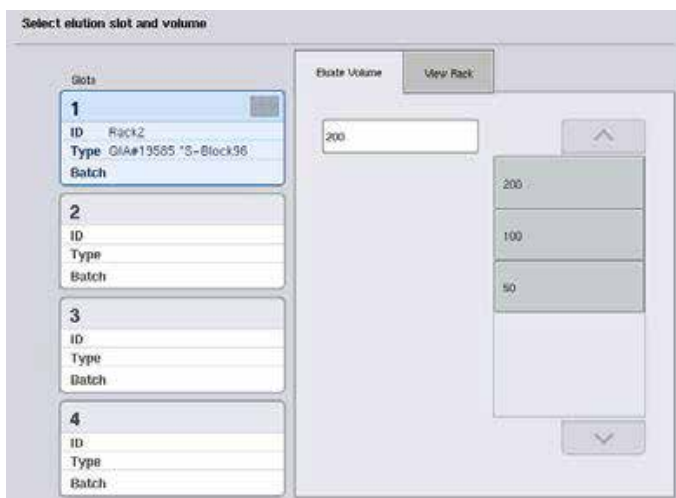
Next

6. Press **Next** to continue with the batch definition workflow.

点击“**下一步**”继续进行批次定义工作流程。

7. Select the elution slot for the batch to be defined by pressing the corresponding slot button.

点击相应的槽按钮，选择待定义批次的洗脱槽。



8. To overwrite the default elution volume, select the required elution volume from the list by pressing the appropriate button. Use the up and down arrows to scroll through the list of

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available elution volumes.

如要覆盖默认的洗脱体积，则点击相应的按钮，从列表中选择所需的洗脱体积。您可使用上下箭头，滚筒可用的洗脱体积列表。



9. Press the **Queue** button to finish the batch definition workflow.

## 10 QIASymphony AS Features

### QIASymphony AS 特征

The QIASymphony AS performs fully automated assay setup using a 4-channel pipetting system, and interfaces directly with the QIASymphony SP, enabling automation of complete workflows. During assay setup, the touchscreen displays the assay setup user interface, providing information about assay runs, including their progress. QIASymphony AS 利用 4 通道移液系统实现完全自动化的反应体系设置，并通过位于 QIASymphony SP 上的内置触摸屏进行操作。在反应体系设置过程中，触摸屏显示检测创建用户界面，提供有关反应体系运行的信息，包括它们的处理信息。

Single or multiple assays can be set up in a single assay run, and master mix can be premixed or can be prepared by the instrument. The QIASymphony AS is provided with predefined protocols, specifically designed for use with QIAGEN real-time and end-point PCR kits. These protocols are called Assay Definitions. Assay Parameter Sets define the parameters for a protocol. These files, including other QIASymphony AS files (e.g., cycler files, result files), can be transferred to/from QIASymphony SP/AS instruments via the USB ports on the QIASymphony SP.

每个反应体系设置运行可创建单个或多个反应体系，预混液可预先混合或由仪器制备。QIASymphony AS 配备有预定义的程序，特别设计用于 QIAGEN 实时、终点检测和 artusPCR 试剂盒。这些程序均称为反应体系定义。反应体系参数集定义一个程序的参数。QIASymphony SP/AS 仪器可通过 QIASymphony SP 上的 USB 接口传输/接收这些文件，包括其他 QIASymphony AS 文件（如，扩增文件，结果文件）。

When an assay run has been defined, the software automatically calculates the worktable requirements for a defined run (e.g., number and type of filter-tips, volume of reagent). An automated inventory scan (performed when the drawers are closed or before an assay run starts) ensures that each drawer is correctly set up for the defined assay run. It is possible to reload filter-tips during a run.

当通过触摸屏定义了一个反应体系时，软件将自动计算定义运行的工作台需求（如，带滤芯吸头的数目和类型，试剂体积）。自动库存扫描（当抽屉关闭时或在启动一个检测运行前执行）确保每个抽屉均对定义检测运行进行了正确配置。运行过程中可重新装载带滤芯吸头。

There are 2 modes of system operation to suit your workflow requirements — independent and integrated. For detailed information, see Sections 12.1.1 and 12.1.2.



有两种系统操作模式适于您的工作流需求 – 整体和独立模式。详细信息请参阅第 12.1.1 和 12.1.2 节。

Refer to the instructions for the transfer module in Section 8.3.3.

有关传输模块的说明，请参阅第 8.3.3 节。

## 10.1 QIASymphony AS principle

### QIASymphony AS 原理

An assay setup run using the QIASymphony AS usually consists of 3 main steps — master mix preparation, master mix distribution, and transfer of templates (e.g., samples, assay controls, and assay standards).

使用 QIASymphony AS 进行的反应体系设置运行通常包括 3 个主要步骤—预混液制备、预混液分配和孔板转移（如，样本，检测对照和检测标准品）。

1. Master mix is prepared with the required reagents. The volume of each master mix component depends on the number of reactions to be set up. After preparation, a mixing step is performed to ensure that the master mix is homogeneous.

用所需的试剂制备预混液。每种预混液组分的体积取决于待创建反应的数目。制备后，混匀，确保预混液的均质性。

**Note:** If using ready-to-use master mix, the mixing step will not be performed. If the extracted samples already contain internal control, a master mix must be provided for assay controls and assay standards that contain internal control as well as for samples without internal control.

**注意：**如果使用即用型预混液，将不需此步骤。如果提取的样本已含有内参，则必须针对含有内参的检测对照和检测标准品以及不含内参的样本提供预混液。

2. Master mix is distributed to the appropriate plate/tube positions in the “Assays” drawer. 分配预混液至“测定”抽屉中相应的孔板/试管位。
3. Assay controls, assay standards, and samples are transferred to the appropriate plate/tube positions in the “Assays” drawer. 将检测对照、检测标准品和样本移至“测定”抽屉中的相应孔板/试管位。

## 10.2 Instrument features

### 仪器特征



- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li><b>1</b> Input adapters (transfer positions)<br/>输入适配器 (传输位置)</li> <li><b>2</b> Input adapters<br/>输入适配器</li> <li><b>3</b> PCR output adapters<br/>PCR 输出适配器</li> <li><b>4</b> Disposable tips<br/>一次性吸头</li> </ul> | <ul style="list-style-type: none"> <li><b>5</b> Tip waste<br/>吸头废弃物</li> <li><b>6</b> "Eluate and Reagents" drawer<br/>“洗脱物和试剂” 抽屉</li> <li><b>7</b> "Assays" drawer<br/>“检测” 抽屉</li> <li><b>8</b> Robotic arm<br/>机械臂</li> </ul> |
|--|---|

### 10.2.1 QIASymphony AS hood QIASymphony AS 防护罩

During an assay run, the QIASymphony AS hood is locked. If force is used to open the hood during an assay run, the run will be paused. 在一个检测运行过程中，QIASymphony AS 防护罩处于锁定状态。如果在一个运行过程中通过外力打开了防护罩，则该运行将暂停。

<b>Important</b> <b>重要</b>	<p>If the QIASymphony AS hood is opened, the instrument will not immediately stop. The instrument will stop when processing of the current protocol step is finished. In some cases, this may take some time. 如果打开 QIASymphony AS 防护罩，仪器将不会立即停止。仪器将在当前程序</p>
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步骤结束时停止。在某些情况下，这可能花费一些时间。
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### 10.2.2 QIASymphony status LEDs

#### QIASymphony 状态 LED 灯

LEDs at the front of the QIASymphony AS are illuminated when an assay run is in progress. The status LEDs flash when an assay run is finished or if an error occurs. Touching the screen turns off the flashing.

在样本制备进行中，位于 QIASymphony AS 前部的 LED 灯呈发光状态。当一个检测运行结束时或如发生错误时，状态 LED 灯将闪烁。触碰屏幕可关闭闪烁。

### 10.2.3 Robotic arm

#### 机械臂

This feature is the same as for the QIASymphony SP, except it does not support a robotic gripper. The QIASymphony AS pipettor head can dispense 2–1500  $\mu\text{l}$  (application- and liquid-dependent). As part of the inventory scan on the “Eluate and Reagents” and “Assays” drawers, the 2D bar code camera on the robotic arm identifies occupied/empty slots and the corresponding adapter types.

此部件特征与 QIASymphony SP 相同，唯一的区别在于此机械臂不支持机械手夹持器。QIASymphony A 移液器头可吸取的剂量为 2–1500  $\mu\text{l}$ （具体取决于应用和所用液体）。作为“洗脱物和试剂”和“检测”抽屉扫描的一部分，机械臂上的二维条形码摄像机可以识别占用/空闲的槽及相应的适配器类型。

# 11 QIASymphony AS Drawers

## QIASymphony AS 抽屉

### 11.1 “Eluate and Reagents” drawer “洗脱物和试剂”抽屉

Purified nucleic acids can be transferred to the “Eluate and Reagents” drawer from the “Eluate” drawer of the QIASymphony SP by automatic transfer (via the transfer module) or by manual transfer. The “Eluate and Reagents” drawer has 3 positions — slots 1, 2, and 3 — that have options for cooling and can accommodate plates and tubes in special adapters. Slots 1 and 2 can be used to accommodate sample racks and slots 1 and 3 can be used to accommodate reagent racks. Slot 1 can be defined as a sample or reagent slot as required. In addition, there are 6 positions that can be used to accommodate disposable filter-tips in tip racks. 可通过自动传送（通过传送模块）或手动传送将纯化后的核酸从 QIASymphony SP “洗脱物”抽屉移至“洗脱物和试剂”抽屉。“洗脱物和试剂”抽屉有 3 个位置—槽 1、2 和 3—具有冷却选项，可通过特定适配器装载孔板和试管。槽 1 和 2 可用于装载样本架，槽 1 和 3 可用于装载试剂架。槽 1 按需要可定义为样本或试剂槽。此外，吸头架中有 6 个方位可用于装载一次性带滤芯吸头。

Adapters are available for the following types of consumables:  
适配器适用的耗材类型如下：

96-well plates

Microplates

Sarstedt screw-cap tubes

PCR plates

Elution Microtubes CL (cat. no. 19588)

96 孔板

微滴定孔板

Sarstedt 螺旋帽试管

PCR 孔板

洗脱微试管 CL，目录号 19588

For more information about the types of 96-well plates and tubes that can be used in the “Eluate and Reagents” drawer, and the corresponding names used in the software, visit [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony).

有关“洗脱物和试剂”抽屉中可用的 96 孔板和试管的更多信息，及软件中使用的相应名称信息，请访问 [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony)。

Reagent holders are available for holding reagents in 2 ml tubes, 5 ml tubes, and 30 ml bottles:

可用于装填 2ml、5ml 和 30ml 瓶装试剂的试剂基座包括：

Reagent holder 1 (18 x 2 ml tubes, 6 x 5 ml tubes)

试剂基座 1 (18 x 2ml 试管, 6 x 5ml 试管)

Reagent holder 2 (18 x 2 ml tubes, 2 x 5 ml tubes, 2 x 30 ml bottles)

试剂基座 2 (18 x 2ml 试管, 2 x 5ml 试管, 2 x 30ml 瓶)

Micro Tube Screw Cap QS (24 x 2 ml tubes)

微试管螺旋帽 QS (24 x 2ml 试管)

### 11.1.1 Filter-tips

#### 带滤芯吸头

The QIASymphony AS uses the same disposable filter-tips as the QIASymphony SP. In addition to 200  $\mu$ l and 1500  $\mu$ l filter-tips, the QIASymphony AS also uses 50  $\mu$ l filter-tips. Tip racks containing 50  $\mu$ l filter-tips are gray. QIASymphony AS 使用与 QIASymphony SP 相同的一次性带滤芯吸头。除 200  $\mu$ l 和 1500  $\mu$ l 带滤芯吸头外，QIASymphony AS 还使用 50  $\mu$ l 带滤芯吸头。含 50  $\mu$ l 带滤芯吸头的吸头架为灰色。

<b>Important</b> <b>重要</b>	Only use filter-tips designed for use with QIASymphony SP/AS instruments. 只可使用专门设计用于 QIASymphony AS 的带滤芯吸头。
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## 11.2 “Assays” drawer

### “检测”抽屉

Assays are set up in plates or tubes in the “Assays” drawer. The “Assays” drawer has 3 positions — slots 4, 5, and 6 — that can be cooled and used to accommodate assay racks in special adapters. It also has 6 positions that can be used to accommodate disposable filter-tips in tip racks (see Section 11.1.1 for more information about disposable filter-tips). 在“检测”抽屉的孔板或试管中安置检测物。“检测”抽屉有 3 个位置—槽 4、5 和 6—可用于冷却并可以专门的适配器装载检测架。还有 6 个位置可用于在吸头架中装填一次性带滤芯吸头（有关一次性带滤芯吸头的更多信息请参见第 11.1.1 节）。

<b>Important 重要</b>	<p>For subsequent analysis on the Rotor-Gene® Q, assays can also be set up in Rotor-Discs. In this case, slots 4-6 must be covered with the Rotor-Disc® Adapter Base Unit QS and up to 2 Rotor-Disc 72 Loading Blocks. A Rotor-Disc 72 can then be placed onto each Rotor-Disc 72 Loading Block.</p> <p>对于在 Rotor-GeneQ 上的后续分析，还可在 Rotor-Discs 中放置检测物。在这种情况下，槽 4-6 必须用 Rotor-Disc 适配器底座部件 QS 和至多 2 个 Rotor-Disc72 装载模块覆盖。然后可将 Rotor-Disc72 放置到每个 Rotor-Disc72 装载模块上。</p>
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<b>Important 重要</b>	<p>Assays that include a normalization step can use slot 6 for positioning a normalization rack. In case a normalization rack is needed, slot 6 cannot be used for an assay rack.</p> <p>包含标准化步骤的检测可使用槽 6 进行标准化管架定位。如果需要标准化管架，则槽 6 不可用于检测管架。</p>
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Adapters are available for the following types of consumables:  
适配器适用的耗材类型如下：

96-well PCR plates

Rotor-Gene Strip Tubes

Rotor-Disc 72

Glass capillaries (20 µl) (for use with the LightCycler®)

96 孔板

Rotor-Gene 联管

Rotor-Disc 72

玻璃毛细管 (20 µl) (供 LightCycler 使用)

For more information about the types of plates and tubes that can be used in the "Assays" drawer and the corresponding names used in the software, visit [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony).

有关“检测”抽屉中可用的孔板和试管类型的更多信息，及软件中使用的相应名称信息，请访问 [www.qiagen.com/goto/QIASymphony](http://www.qiagen.com/goto/QIASymphony)。

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## 12 QIASymphony AS Basic Functions

### QIASymphony AS 基本功能

#### 12.1 Definitions

##### 定义

##### 12.1.1 Independent operation

###### 独立操作

The QIASymphony SP and QIASymphony AS can be operated independently of each other. It is possible to perform 2 independent runs (one on the QIASymphony SP and one on the QIASymphony AS) at the same time, where neither run influences the other. QIASymphony SP 和 QIASymphony AS 可相互独立操作。您可以同时进行 2 项独立的运行（分别在 QIASymphony SP 和 QIASymphony AS 上运行），这两者之间互不影响。

It is also possible to perform an independent run on the QIASymphony SP, and then transfer eluates via the transfer module to the QIASymphony AS. Here, samples can be processed using an independent assay setup run. In this case, sample preparation run definition must be performed first, and when the eluate rack is transferred to the QIASymphony AS, assay setup run definition is performed.

您也可以在 QIASymphony SP 上进行单独的运行，然后再通过传输模块将洗脱物转移到 QIASymphony AS 上。在此可采用独立的检测构建运行处理样本。这种情况下，必须首先进行样本制备运行定义，且在将洗脱架转移到 QIASymphony AS 上之后，进行检测构建运行定义。



Independent operation.  
独立操作。

### 12.1.2 Integrated operation 集成操作

An integrated run consists of a sample preparation run on the QIAsymphony SP and then an assay setup run on the QIAsymphony AS. Eluates are automatically transferred from the QIAsymphony SP to the QIAsymphony AS via the transfer module without user interaction. An integrated run is defined in the software for the complete workflow before starting the run. 集成运行包括在 QIAsymphony SP 上进行的样本制备，以及之后在 QIAsymphony AS 上进行的检测构建运行。无需用户干预，洗脱物即可通过传输模块自动从 QIAsymphony SP 转移到 QIAsymphony AS 上。开始运行前，即需要针对整个工作流程定义集成运行。





Integrated operation.  
集成操作。

### 12.1.3 Run with normalization 含标准化步骤的运行。

The QIASymphony AS can perform a normalization step (i.e., eluates of known concentration are diluted to target concentrations) before assay setup. This option is available for most assay definitions in combination with a normalization definition file, which is available on request from the QIAGEN Applications Laboratory. Please contact QIAGEN Technical Services for more information.

QIASymphony AS 可在检测构建前进行标准化步骤（即，将已知浓度的洗脱物稀释到目标浓度）。结合标准化定义文件（QIAGEN 应用实验室可应您的要求提供）的大多数检测定义，均可选用此选项。更多信息请联系 QIAGEN 技术服务部咨询。

### 12.1.4 Standard curve 标准曲线

The QIASymphony AS can perform series dilutions of standards, using concentrated standard solution and dilution buffer, both provided by the user. This feature is only available when defined by an assay. This option can be enabled on request by the QIAGEN Applications Laboratory.

QIASymphony AS 可采用浓缩的标准溶液和稀释缓冲液（均由用户提供）对标准品进行倍比稀释。仅在进行检测定义时，可选用此功能。QIAGEN 应用实验室可应您的要求为您启用此选项。

## 12.2 Preparing a run 准备运行

Before defining a run, available adapter(s) and holder(s) must be configured in the software. If work list(s) and rack file(s) will be used in the run, these files must be transferred to QIASymphony SP/AS instruments.

定义一项运行前，必须在软件中配置可用的适配器和基座。如果要在运行中使用工作列表和管架文件，此类文件必须转移到 QIASymphony SP/AS 仪器上。

For detailed information about transferring process files, work lists, rack files, and concentrations data files, see Section 6.

有关转移过程文件、工作列表、管架文件和浓度数据文件的详细信息，请参阅第 6 节。

### 12.2.1 Assay favorites 检测收藏夹

In the integrated mode, personalized assay favorites can be defined for quicker assignment within the setup screen for **Integrated Operation**. 在集成模式下，为了在“集成操作”的设置界面内更快地进行分配，可以定义个人检测收藏夹。

1. Press the **Tools** tab and select **Assay Favorites**.



点击“**工具**”并选择“**检测收藏夹**”。

The **Define Assay Favorites** screen appears as shown below.

随即显示如下的“**定义检测收藏夹**”界面。



The dialog contains a list showing the available assays for “Integrated Setup” and the set of favorite buttons identical to the ones in the “Integrated Setup” screen.

此对话框含有一个列表（其中显示有可选的“集成设置”检测）以及与“集成设置”界面相同的收藏夹按钮组合。

2. Select the assay to assign as a favorite.

选择要作为收藏夹分配的检测。

3. Assign the selected assay to a selected blank **Favorites** button.



The assay will be displayed on the assigned favorite button.

将选定的检测分配到选定的空白“收藏夹”按钮。

此后，将会在分配的收藏夹按钮上显示该检测。

4. Press **Save**.

点击“保存”。

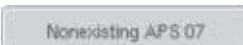


Changes are saved in the user data, enabling user-specific configuration of the **Favorites** buttons.

更改保存到用户数据中，允许对“收藏夹”按钮进行用户专用配置。

5. To remove assays as favorites, select the button and then press **Clear**.

如要移除检测收藏夹，可选中该按钮，然后点击“清除”。



The selected assay will be removed from the **Assay Favorites**.

随后，选中的检测将会从“检测收藏夹”中移除。



6. If **Cancel** is pressed, a message appears warning that all changes will be lost.



如果点击“取消”，则会出现一条提示消息，警告您所有的更改都会随之丢失。

## 12.3 Integrated run 集成运行

Follow the steps below after switching on the instrument and logging in as a user.  
打开仪器并以用户身份登录后，遵照如下步骤操作。

1. Open the QIASymphony AS hood.  
打开 QIASymphony AS 防护罩。
2. Insert the tip chute into the QIASymphony AS.  
将吸头料槽插入到 QIASymphony AS 中。
3. After maintenance has been performed, load all items of the QIASymphony SP/AS (e.g., tip chutes, drop catcher, magnetic-head guards, tip disposal bags, empty waste bottle, and tip park station). Close the QIASymphony SP/AS hoods.  
进行完维护之后，在 QIASymphony SP/AS 上加载所有所需的物品（例如，吸头槽、防滴器、磁头保护装置、吸头处理袋、空废弃物瓶以及吸头置台）。关闭 QIASymphony SP/AS 防护罩。
4. Switch to the **Integrated Run** user interface.  
切换至“**集成运行**”用户界面。
5. Load the QIASymphony SP “Waste drawer”.  
加载 QIASymphony SP “废弃物抽屉”。
6. Load the “Eluate” drawer with the correct rack inside the corresponding cooling adapter, together with the transfer frame on “Elution slot 1”. Assign the eluate rack to “Elution slot 1” on the touchscreen and start the scan.  
在对应的冷却适配器内加载带有正确管架的“洗脱物”抽屉，同时在“洗脱槽 1”上加载转移框。在触摸屏上将洗脱架分配到“洗脱槽 1”上，然后开始扫描。
7. Load the “Reagent and Consumables” drawer according to the handbook of the kit used.  
根据所用试剂盒的手册，加载“试剂和耗材”抽屉。
8. Press **Define Run** to define an integrated run on the QIASymphony SP/AS.  
点击“定义运行”，在 QIASymphony SP/AS 上定义集成运行。
9. Load the “Sample” drawer with samples and optional internal controls.  
加载带有样本和可选的内参的“样本”抽屉。
10. Press **Edit Samples** to check or change sample tube types and inserts. The default tubes are predefined for the inserts in the configuration and can be changed.  
点击“**编辑样本**”，检查或更改样本试管和垫片。在配置中预先定义了默认试管类型，您可对其进行更改。

11. Press **Define Assays** to assign assays to sample positions, or use the previously defined **Assay Favorites** buttons to assign assays to the sample positions.  
 点击“**定义检测**”为样本位置分配检测，或者使用之前定义的“**检测收藏夹**”按钮为样本位置分配检测。
12. Create AS batch(es) using the defined SP batch(es)  
 使用定义的 SP 批次创建 AS 批次。
13. Queue the integrated run by pressing **OK**.  
 点击“**OK**”进行集成运行排队。
14. **Optional:** Define internal control(s).  
**可选：**定义内参。
15. Start the integrated run by pressing **Run**.  
 点击“**运行**”，启动集成运行。
16. While the integrated run is being processed on the QIASymphony SP, load the QIASymphony AS. Open the “Eluate and Reagents” and “Assays” drawers.  
 在 QIASymphony SP 上处理集成运行时，加载 QIASymphony AS。打开“洗脱物和试剂”抽屉。
17. Load assay rack(s) into the appropriate precooled adapter(s) and place them onto the “Assay” slot(s).  
 在对应的预冷却适配器中加载检测管架，然后将其放入到“检测”槽中。
18. Press the orange **Assay Rack** button, and press **Load** in the next screen to load the assay racks(s) virtually.  
 点击橙色的“**检测管架**”按钮，然后在下一界面点击“**加载**”，加载检测管架。
19. Fill each reagent tube with the required volume of appropriate reagent and place the reagent tubes, without lids, into the appropriate positions of precooled adapters for reagents.  
 向各个试剂试管中加入所需体积的对应试剂，然后将未盖盖的试剂试管放入到试剂的预冷却适配器上的对应位置。
20. Press the orange **Reagent Rack** button, and press **Load** in the next screen to load the reagent rack(s) virtually.  
 点击橙色“**试剂管架**”按钮，然后在下一界面点击“**加载**”，加载试剂管架。
21. Place the prepared assay adapter(s) onto the appropriate slot(s).  
 将准备好的检测适配器放到对应的槽上。

<b>Important 重要</b>	Ensure that reagents are completely thawed. If desired, enter a kit bar code for each assay. 确保试剂已经完全熔解。如有必要，可输入各个检测的试剂盒条形码。
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22. Load disposable filter-tips into the “Eluate and Reagents” and “Assays” drawers. Load at least the required number of each tip type.

在“洗脱物和试剂”及“检测”抽屉内加载带滤芯的一次性吸头。每一种吸头类型至少加载必需的数量。

23. Close the “Eluate and Reagents” and “Assays” drawers and start the inventory scan.

关闭“洗脱物和试剂”及“检测”抽屉，开始库存扫描。

24. Assay setup will start automatically after the inventory scan was performed successfully and the sample preparation for the integrated batch was finished.

库存扫描成功完成后，检测构建会自动启动，之后集成批次的样本制备完成。

25. When running more than one integrated batch, remove the previously finished integrated batch in the **Integrated Setup** overview. Reload the QIASymphony AS “Eluate and Reagents” and “Assays” drawers to continue the next AS batch. “洗脱物和试剂”及“检测”抽屉，继续下一 AS 批次处理。

### 12.3.1 Defining an integrated run

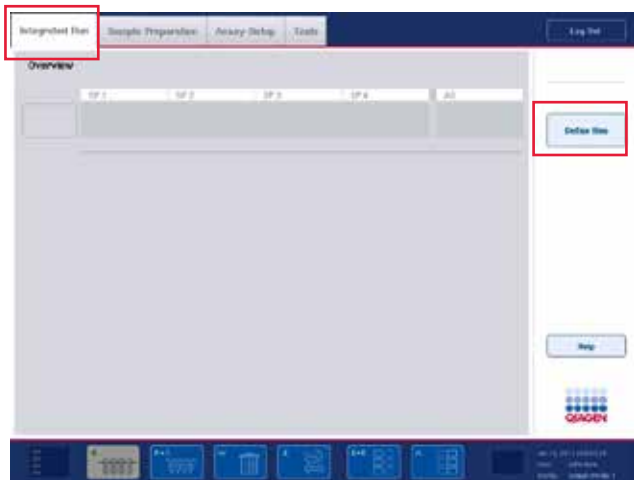
#### 定义集成运行

When defining an integrated run, screens guiding you through the steps appear on the touchscreen.

定义集成运行时，会在触摸屏上显示指导您完成整个流程的界面。

It is only possible to define an integrated run if an eluate rack and a transfer frame have been loaded on “Eluate slot 1” of the QIASymphony SP. To save time, the system checks for the transfer frame during the rack carrier inventory scan. 只有在 QIASymphony SP 的“洗脱槽 1”上加载了洗脱管架和转移框，才可定义集成运行。为了节省时间，在管架托架库存扫描期间，系统会检查转移框。

Select the **Integrated Run** tab in the overview screen, and then press **Define Run**.  
在概览界面选择“集成运行”标签，然后点击“定义运行”。



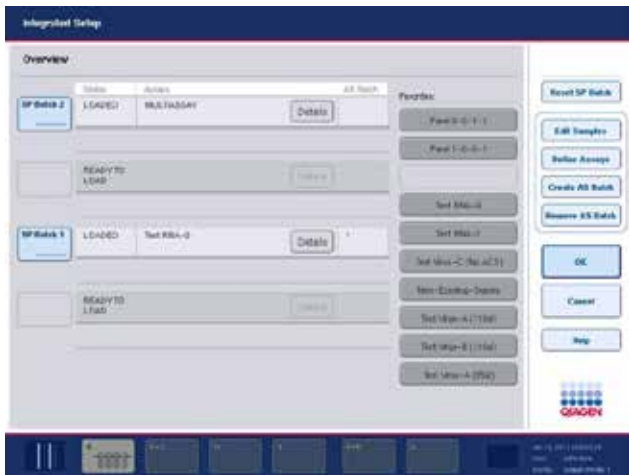
The **Integrated Setup** screen appears.  
出现“集成设置”界面。

If an error message appears, see Section 13 for information about solving the problem.  
如果出现错误消息，请参阅第 13 章了解如何排除故障。

The **Integrated Setup** screen provides an overview of the defined batches and/or allows batches to be defined.  
“集成设置”界面提供有定义的批次概览，且/或允许定义批次。

To define a batch, follow the steps below.  
如需定义批次，请按如下步骤操作。

1. Select the batch button, and press **Reset SP batch**.  
选择批次按钮，然后点击“重置 SP 批次”。
2. Edit samples (this includes resolving errors in the sample IDs of the sample tubes).  
编辑样本（此步骤包括接触样本试管的样本 ID 错误问题）。
3. Assign an assay to all samples of a batch.  
为某个批次的所有样本分配检测。
4. Define assays for a batch.  
为批次定义检测。
5. Create or remove AS batches from their related SP batch.



An integrated run consists of one or more integrated batches. An integrated batch is a combination of one or more SP batches and one AS batch. Hence, the eluates of several SP batches can be processed in one AS batch.

所有集成运行都包含一个或多个集成批次。一个集成批次包括一个或多个 SP 批次，以及一个 AS 批次。因此，可以通过一个 AS 批次处理多个 SP 批次。

To define an integrated batch, follow the steps below:  
如要定义集成批次，可按如下步骤操作。

1. Load a tube carrier. The loaded batch is displayed on the touchscreen.  
加载试管托架。加载的试管托架会显示在触摸屏中。
2. Assign assays to sample positions.  
为样本位置分配检测。



3. Create an AS batch for the related SP batch(es).  
针对相关的 SP 批次创建 AS 批次。



4. Queue the integrated run.

### 12.3.1.1 Assigning assays to sample positions 为样本位置分配检测

Assays can be assigned to samples using:  
您可通过以下方式为本样本分配检测：



## Favorite assays

The **Assay Assignment** screen (manual assignment)

Work lists

“收藏夹”检测

“检测分配”界面（手动分配）

工作列表

### 12.3.1.2 Favorite assays

#### 收藏夹检测

First, you need to set up a list of **Favorite** assays (see Section 12.2.1) and then follow the steps below.

首先，您需要设置一个“收藏夹”检测列表（参见第 12.2.1 节），然后按照如下步骤操作。

1. Select the desired SP batch(es).  
选择所需的 SP 批次。
2. Select the desired **Favorite** assay.

### 12.3.1.3 Assigning assays using the Assay Assignment screen

#### 通过检测分配界面分配检测



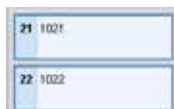
1. Select the SP batch.  
选择 SP 批次。

2. Press **Define Assays** in the **Integrated Setup** screen.  
进入“集成设置”界面，点击“定义检测”。



3. The **Assay Assignment** screen appears. Here, assays can be assigned to specific sample positions.  
随即出现“检测分配”界面。在此，您可以将检测分配到特定的样本位置。

4. Select the sample positions to which the assay should be assigned.



These will be shown in light blue before selection and darker blue after selection.

选择要将检测分配到样本位置。选择之前，此位置变为淡蓝色，选择后此位置变为深蓝色。



5. Alternatively, select all the samples by pressing **Select All**.  
也可点击“全选”，选中所有样本。

- Select the desired assay from the **Assays** list.

从“检测”列表中选择所需的检测。

The selected assays will be assigned to the selected positions. A number will appear in the bottom right corner of the assigned sample positions.

This number indicates the number of assays that have been assigned to a particular sample.

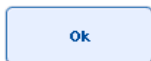
选中的检测将会被分配到选定的位置。随即在分配的样本位置右下角会出现一个数字。该数字表示分配到特定样本的检测数目。

- If there is more than one assay to be assigned, repeat steps 4 and 5 for all assays.

如果要分配多个检测，则针对每个检测重复 4 至 5 步。

For each assigned assay, there is a separate tab. When an assay tab is selected, all samples with this assigned assay are colored green and have the same assay-specific number in the bottom left corner of the sample position.

各个分配的检测都有一个单独的标签。选中检测标签之后，所有与此检测相关的样本都会变为绿色，同时在样本位置的左下角出现相同的检测专用数字。



- Press **OK**. The **OK** button becomes inactive when at least one conflict exists.

### Modifying

### assay

### specifications

#### 修改检测参数

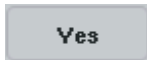
Depending on the assay definition, it is possible to modify certain assay specifications for the run that is being defined.

根据具体的检测定义，您可以修改正在定义的运行的特定的检测参数。

<b>Important</b>	For “Read only” Assay Parameter Sets, it is ensured that when defining a run,
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<b>重要</b>	only the number of replicates can be changed using the touchscreen. 对于“只读型”检测参数集，必须确保定义运行时，仅可使用触摸屏修改重复数目。
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<b>Important 重要</b>	It is not possible to modify assays in work list mode. 在工作列表模式下，不可修改检测。
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1. Press the **Specification** button. The **Assay Specifications** screen will appear.  
点击“参数”按钮，随即出现“检测参数”界面。
2. Select the assays for which the parameter will be changed from the tabs.  
从标签内选择希望更改参数的检测。
3. Press **Yes** or **No** to define whether or not a ready-to-use master mix will be used.  
点击“是”或“否”，定义是否使用即用型预混液。  
Parameters are listed under **Sample**, **Assay controls**, and **Assay standards** headings.  
参数列在“样本”、“检测对照”和“检测标准品”标题下。

4. Press one of these headings to view a list of parameters. To scroll through the list, use the up and down arrows.

点击上述其中一个标题，浏览参数列表。如需滚动列表，可使用上下箭头按钮。

Depending on the assay, some headings are not visible.

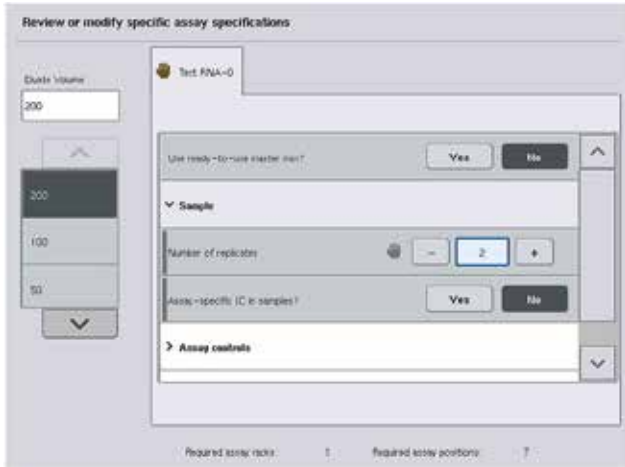
根据具体的检测，部分标题可能不可见。

5. Modify the desired parameter(s).

修改所需的参数。

After modifying a parameter, the hand symbol is displayed in the active assay tab. After modifying assay parameters, a hand symbol appears.

修改参数后，在激活的检测标签内会显示手掌图标。修改检测参数后，手掌图标消失。



6. If the parameters for more than one assay need to be modified, repeat steps 2–5 for the other assay(s).

如果有多个检测需要修改参数，则针对其他检测重复 2-5 步。



7. To overwrite the default elution volume, select the required elution volume from the **Eluate Volume** list on the left side of the screen by pressing the appropriate button.

如要覆盖默认洗脱体积，可点击相应的按钮，从界面左侧的“洗脱体积”列表中选择所需的体积。



8. Press **OK** to save the changes and to return to the **Assay Assignment** screen.

**Important**  
**重要**

If the parameters are modified, the changes will not be saved in the assays. They will be used for the current run only. To change parameters in an assay for future runs, use the **Process Definition** editor tool of the QIAsymphony Management Console.

参数修改后，改动不会保存到检测中。此类参数仅用于目前的运行。如要为以后的运行修改检测参数，可使用 QIAsymphony 管理控制台的“过程定义”编辑器工具。

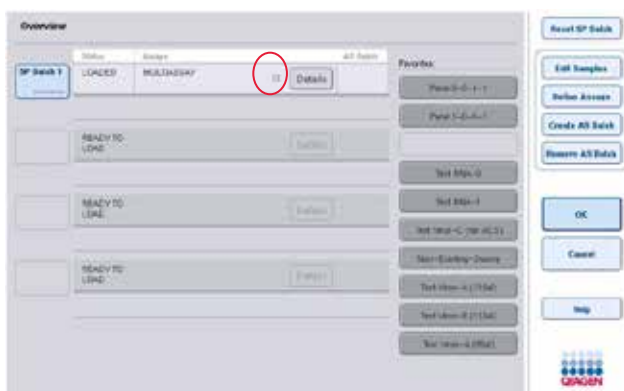
#### 12.3.1.4 Assigning assays using work lists

##### 使用工作列表分配检测

If a work list(s) is used, assays are automatically assigned to samples via their written bar code(s), as defined in the work list(s). Those batches that have assays assigned to them by work lists are marked with a work list symbol in the **Assays** column (circled in the image below). Depending on the configuration, the assignments can be edited in the **Assay Assignment** screen by pressing the

**Define Assays** button.

如果使用工作列表，则检测会通过他们的录入条形码（在工作列表中定义）分配到样本。根据工作列表分配检测的批次，在“检测”一列会出现工作列表符号（下图中圈出的部分）。根据具体的配置，可点击“定义检测”按钮，在“检测分配”界面编辑分配内容。



#### 12.3.1.5 Creating AS batches

##### 创建 AS 批次

An AS batch can be created either from a single SP batch or from more than one SP batch. 您可通过单个或多个 SP 批次创建 AS 批次。

To create an AS batch, follow the steps below. 如需创建 AS 批次，可按如下步骤操作。

1. In the integrated setup **Overview** screen, press one or more SP batches to select them.  
进入集成设置“概览”界面，点击一个或多个 SP 批次将其选中。
2. When selected, the batch button(s) will change to gray.  
选中之后，批次按钮变为灰色。
3. Press the **Create AS Batch** button.  
点击“创建 AS 批次”按钮。





An AS batch will be created for the selected SP batches. A number will appear in the **AS Batch** column. This number indicates which AS batch a particular SP batch is linked to.

随即针对选定的 SP 批次创建一个 AS 批次。在“AS 批次”列将会出现一个数字。该数字表示与某个 SP 批次关联的具体 AS 批次。

4. Press **OK**.

点击“OK”。



The created integrated batches are queued. Afterwards the **Main Screen** appears.

创建的集成批次进行排队。之后，出现“主界面”。

<b>Important</b> <b>重要</b>	To unlink an AS batch from an SP batch, press the SP batch(es) to select them, and then press <b>Remove AS Batch</b> . 如要解除 AS 批次和某个 SP 批次之间的关联，可点击 SP 批次将其选中，然后点击“移除 AS 批次”。
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### 12.3.1.6 Defining internal controls

#### 定义内参

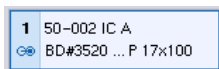


1. First load the internal controls into “Slot A” of the “Sample” drawer.

首先将内参加载到“样本”抽屉的“槽 A”内。

2. Press **Define IC** in the **Integrated Run** tab. The **Sample Preparation/Internal Controls** screen appears.

点击“集成运行”标签下的“定义 IC”。随即出现“样本制备/内参”界面。



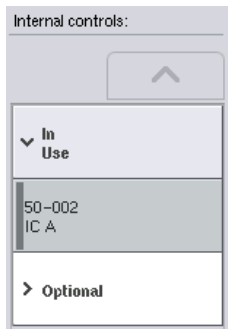
3. Press the loaded internal control(s) to select them.

点击载入的内参，将其选中。



4. If the tube type differs from the default, press the **IC Tubes** button, and select a tube type.

如果所用的试管类型与默认类型不同，则点击“IC 试管”按钮选择一种试管类型。



5. Select an internal control from the **Internal controls** list. The selected internal control will be assigned to the selected loaded internal control(s).

从“内参”列表中选择一种内参。选中的内参将会被分配给选定的加载的内参。

6. Press **OK**.

The selected internal controls will be assigned to the selected internal control tubes. The **Main Overview** screen appears again. 选中的内参将会被分配给选定的内参试管。随即再次出现“主界面”。



#### 12.3.1.7 Starting an integrated run

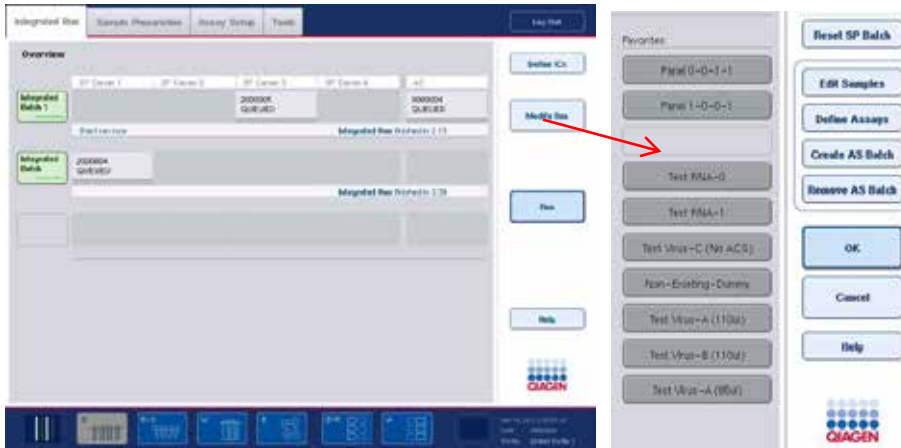
##### 开始集成运行

1. Load the QIASymphony SP worktable.  
加载 QIASymphony SP 工作台。
2. Start the integrated run by pressing **Run**.  
点击“运行”开始集成运行。
3. While the integrated run is being processed, load the QIASymphony AS worktable.

#### 12.3.1.8 Modifying an integrated run

##### 修改集成运行

If an integrated run has already been defined, the **Integrated Run** screen displays the status of all defined integrated batches and the relationship between SP and AS batches. 如果已经定义某个集成运行，则“集成运行”界面会显示所有定义的集成批次的状态，以及 SP 和 AS 批次之间的关系。



1. Press **Modify Run**. The **Integrated Setup** screen appears and displays an overview of the defined batches.  
 点击“修改运行”。随即出现“集成设置”界面，同时显示一份定义的批次概览。



2. Use the **Remove AS Batch** button to remove an AS batch from the integrated run of the related SP batch.



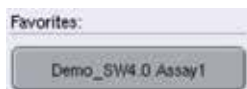
This button is unavailable if the AS batch has been started.  
 使用“移除 AS 批次”按钮从相关 SP 批次的集成运行中移除 AS 批次。

3. The **Edit Samples** button allows bar code reading errors for sample tubes to be resolved. In addition, sample IDs, sample types, and sample labware can be modified.



通过“编辑样本”按钮，可以解决样本试管条形码读取错误问题。此外，样本 ID、样本类型以及样本器具均可在此修改。

4. Assign the assay to all samples of a batch via the favorite buttons.  
 通过收藏夹按钮为某个批次的所有样本分配检测。



5. Define assays for a batch.  
 为某个批次定义检测。



6. Use the **Create AS Batch** button to assign an AS batch to one or more SP batches.



使用“创建 AS 批次”按钮为

<b>Important</b> 重要	It is possible to change the order in which batches of an integrated run are processed by manually unloading, reloading, and redefining an integrated batch.
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	通过手动卸除、重新加载和重新定义集成运行，可以更改集成运行批次处理的顺序。
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<b>Important</b> <b>重要</b>	Be aware that if you use the functions <b>Modify Run</b> and <b>Create AS Batch</b> after an integrated run has been queued, the order in which SP and AS batches are processed by the system may be different to the order in which batches would be processed if AS batches were created before queuing the integrated run. 请注意，如果您在集成运行排队时使用“修改运行”和“创建 AS 批次”功能，系统处理 SP 和 AS 批次的顺序可能与集成运行之前创建 AS 批次时的批次处理顺序不同。
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For more detailed information, refer to Appendix A of the *QIASymphony SP/AS User Manual — Operating the QIASymphony AS*.  
更多详细信息，请参阅 QIASymphony SP/AS 用户手册 - QIASymphony AS 操作的附录 A。

<b>Important</b> <b>重要</b>	At least one assay has to be assigned to samples of the QIASymphony SP batch. 必须至少有一个检测分配给 QIASymphony SP 批次的样本。
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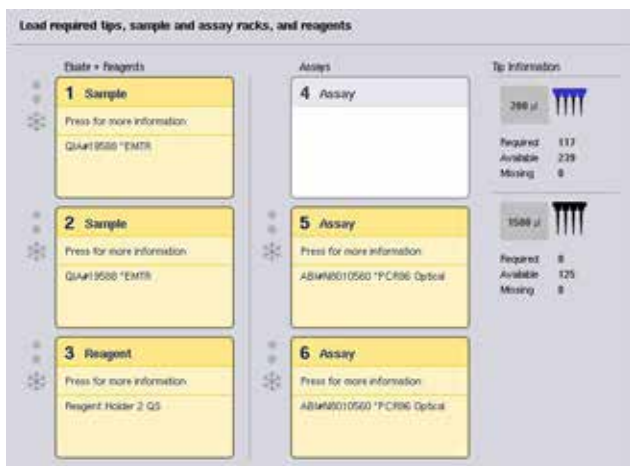
<b>Important</b> <b>重要</b>	This action can also be performed for completed QIASymphony SP batches, allowing automated assay setup of samples for which purification has already been completed. 此操作还可针对完成的 QIASymphony SP 批次进行，以便完成纯化完成的样本的检测构建。
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### 12.3.2 Loading an integrated run 加载集成运行

First, load the QIASymphony SP. Then load the QIASymphony AS. This section outlines how to load samples, reagents, and consumables onto the QIASymphony AS.  
首先，加载 QIASymphony SP。然后加载 QIASymphony AS。本节概述了向 QIASymphony AS 加载样本、试剂盒耗材的方法。

In addition, the **Loading Information** screen provides an overview of which labware, consumables, and adapters are required for a run. The number and type of filter-tips that are required is displayed. Press a particular slot for more detailed information.

此外，加载信息界面还提供了运行所需的器具、耗材和适配器概览。同时会显示所需的带滤芯吸头数目和类型。您可点击特定的槽，了解更多详细信息。



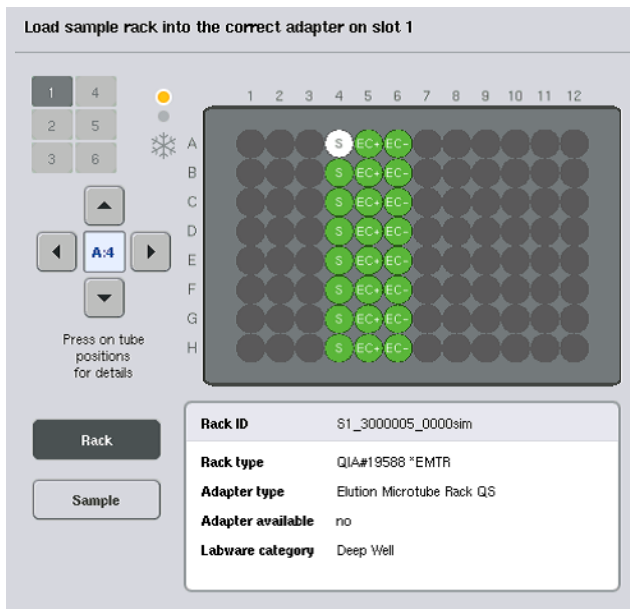
### 12.3.2.1 Loading sample racks 加载样本管架

**Sample**  
**样本槽**

**slots**

Press a sample slot for detailed loading information. A schematic diagram of the sample rack appears.

您可点击样本槽了解详细的加载信息。随即会出现一个样本架示意图。



Press an individual position to view information about a particular sample. You can also use the arrows to select a position. When **Sample** is pressed, the sample ID, sample type, status, and sample volume are displayed, as well as the assay to which this sample has been assigned. 点击某个单独的位置，浏览有关特定样本的信息。您也可使用箭头选择位置。点击“**样本**”后，会显示样本 ID、样本类型、状态和样本体积，同时显示此样本分配的检测。

To view information about all of the samples in the sample rack in tabular format, press **List View**. 如要通过表格形式浏览样本管架内所有样本的信息，可点击“**列表视图**”。

<b>Important</b> <b>重要</b>	<p>The sample rack is transferred from the QIASymphony SP to the QIASymphony AS. Therefore, the sample rack does not need to be loaded onto the QIASymphony AS for an integrated run.</p> <p>样本管架已从 QIASymphony SP 转移到 QIASymphony AS。因此，不必为了集成运行将样本管架加载到 QIASymphony AS。</p>
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### 12.3.2.2 Loading assay rack(s)

#### 加载检测管架

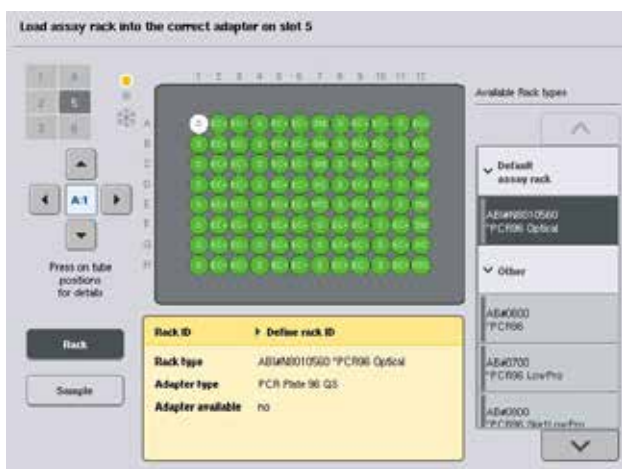
“Assay”

slots

“检测”槽

Press an assay slot for detailed loading information. A schematic diagram of the assay rack appears.

点击某个检测槽，了解详细的加载信息。随即会出现一个检测管架示意图。



Press an individual position to view information about the sample at that position. You can also use the arrows to select a position. When **Sample** is pressed, the sample ID, sample type, status, and volume are displayed, as well as the assay to which this sample has been assigned.

点击某个位置，浏览该位置样本的信息。您可以使用箭头选择位置。点击“**样本**”后，会显示样本 ID、样本类型、状态和样本体积，同时显示此样本分配的检测。

To view information about all of the positions in the assay rack in tabular format, press **List View**.

如要通过表格形式浏览样本管架内所有位置的信息，可点击“**列表视图**”。

Assay

racks

检测管架

The required number of assay rack(s) is calculated by the software. The maximum number of assay racks is 3. If an assay run includes a normalization step, up to 2 assay racks can be used. If a Rotor-Disc is used as an assay rack, slots 4–6 are covered by the Rotor-Disc Adapter Base Unit QS. A maximum of 2 Rotor-Discs can be used. 所需的检测管架数目通过软件计算出来。检测管架的最大数目为 3。如果某个检测运行包含标准

化步骤，则至多可使用 2 个检测管架。如果使用 Rotor-Disc 作为检测管架，则槽 4-6 被 Rotor-Disc 适配器基础单元 QS 所占据。最多可使用 2 个 Rotor-Disc。

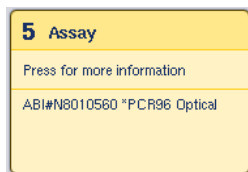


Loading information screen with assay racks assigned to slot 5 and 6.  
检测管架分配到槽 5-6 的“加载信息”界面。

“Assay” slots are assigned automatically by the software, the assignment cannot be changed by the user. The assignment depends on the processing workflow. Slot 5 is processed first, then slot 6, and then finally slot 4. “检测”槽通过软件自动分配，用户无法更改该分配结果。分配取决于具体的处理工作流程。槽 5 首先处理，槽 6 其次，最后处理槽 4。

### Assigning assay racks

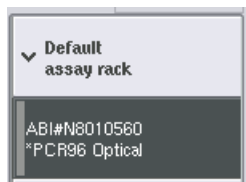
1. Open the **Assays** drawer. Temporary cooling for the defined slots is started.



2. In the **Assay Setup/Loading information** screen, press the first “Assay” slot to be loaded (highlighted yellow). Detailed loading information for the slot is shown  
进入“检测构建/加载信息”界面，点击第一个需要加载的“检测”槽（黄色高亮）。槽的详细加载信息将会显示出来。

3. Assign rack type and rack ID.

分配管架类型和管架 ID。



For details, see this section “Assigning assay racks” or the following section “Assigning assay rack types”.

如需了解详情，可参阅“分配检测管架”一节或后文的“分配检测管架类型”一节。

4. Place the empty assay rack in the appropriate adapter on the correct “Assay” slot(s).

将空的检测管架放在正确的“检测”槽上的相应适配器上。

Ensure that the appropriate adapter is used with each assay rack. 确保各个检测管架搭配正确的适配器使用。

5. Press “Load”. The “Assay Setup/Loading information” screen appears again. The loaded slot is now blue.

点击“加载”。随即再次出现“检测构建/加载信息”界面。加载的槽现在变为蓝色。



6. If more assay racks have to be loaded, repeat steps 2–5 for the second assay slot.

如果需要加载更多的检测管架，则针对第二个检测槽重复步骤 2-5。

7. Leave the “Assays” drawer open to enable loading of normalization rack (optional) and disposable filter-tips.

<b>Important</b> <b>重要</b>	<p>When using segmented labware, the required plasticware and corresponding positions will be displayed. Ensure that the correct positions are used. The positions will not be checked during the inventory scan.</p> <p>使用分段的器具时，会显示所需的塑料器具和相应的位置。请确保所用的位置正确。库存扫描期间，不会检查位置。</p>
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### 12.3.2.3 Assigning assay rack types

#### 分配检测管架类型

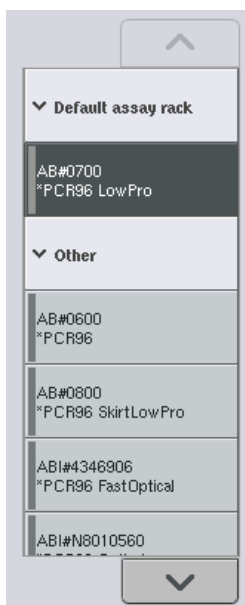
A default assay rack type is defined in each Assay Parameter Set. This default assay rack type is automatically displayed in the “Assay” slots in the **Assay Rack(s)** screen. For some assay rack types, the assay rack can only be changed to an assay rack that uses the same adapter type. If Assay Parameter Sets have been assigned that have different default rack types, no rack type will be specified in the corresponding assay slot. All rack types that are specified in one or more of the assays are listed under **Default**, and all other assay racks that can be used are listed under **Other**.

各个检测参数集内定义了默认的检测管架类型。这一默认检测管架类型会自动显示在“检测管架”界面的“检测”槽内。对于部分检测管架类型，仅可将检测管架更改为使用相同类型适配器的检测管架。如果分配的检测参数集具有不同默认管架类型，则相应的管架槽内不会指定管架类型。所有在一个或多个检测中指定的管架类型都会列在“默认”下，所有可用的其他检测管架则列在“其他”下。

To change the assay rack type or to assign an assay rack type, follow the steps below.  
如要更改检测管架类型或分配检测管架类型，请按如下步骤操作。

1. Select a rack type from those listed on the right. The up and down buttons can be used to scroll through the list.

从右侧所列的内容中中选择管架类型。可采用上下箭头按钮在列表中上下滚动。



2. The assigned rack type is then displayed in the selected “Assay” slot.

<b>Important</b> <b>重要</b>	The list only displays rack types that have the same assay rack format. 此列表仅显示具有同一检测管架规格的管架类型。
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#### 12.3.2.4 Assigning assay rack ID(s) 分配检测管架 ID

The assigned assay rack ID will be used to create a rack file. The name of the rack file is **RackFile\_rack ID**.

分配的检测管架 ID 将会用于创建管架文件。该管架文件的名称为 **RackFile\_rack ID**。

<b>Important</b> <b>重要</b>	Be aware that some symbols may not be used in the rack file name and some symbols will be converted. 请注意，部分符号不会在管架文件中使用，部分符号会转化后显示。
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<b>Important</b> <b>重要</b>	If the assay rack type is changed after a rack ID has been entered, the rack ID will remain the same. 如果在输入管架 ID 之后更改检测管架类型，则管架 ID 仍相同。
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To assign rack IDs, follow the steps below.  
如要分配管架 ID，请按如下步骤操作。

1. Press **Rack ID**. The **Manual Input** screen appears.  
点击管架 ID。随即出现“手动输入”界面。
2. Manually enter an assay rack ID. Alternatively, use the bar code scanner to enter a rack ID.

Rack ID

手动输入检测管架 ID。也可使用条形码扫描仪输入管架 ID。

The entered assay rack ID will appear in the corresponding “Assay” slot. If a rack type has already been assigned to the “Assay” slot, the slot will now appear blue.

输入的检测管架 ID 会出现在相应的“检测”槽内。如果该“检测”槽已经分配了管架类型，则该槽会显示为蓝色。

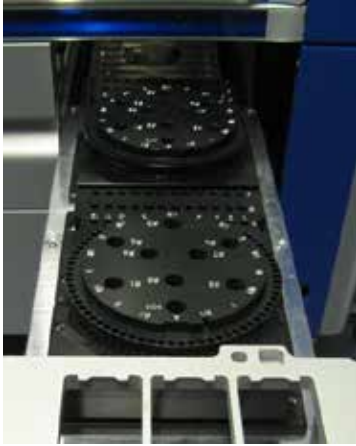
3. Press the **Automatic ID** button. The software will automatically assign an ID with the format **SlotNr\_RunID\_Suffix** (e.g., S5\_1000017\_0000).

Automatic ID

A rack ID is automatically assigned to the selected “Assay” slot(s). If a rack type has been assigned to the “Assay” slot(s), the slot(s) will now appear blue. **SlotNr\_RunID\_Suffix** (例如，S5\_1000017\_0000)。

<b>Important</b> <b>重要</b>	When using a Rotor-Disc, place the Rotor Disc onto the Rotor Disc adapter, the adapter onto the Rotor Disc Adapter Base Unit QS, and the base unit onto slot positions 4, 5, and 6. 使用 Rotor-Disc 时，请将 Rotor Disc 放在 Rotor Disc 适配器上，将适配器放在 Rotor Disc 基座单元 QS 上，再将基座单元放到槽 4、5 和 6 上。
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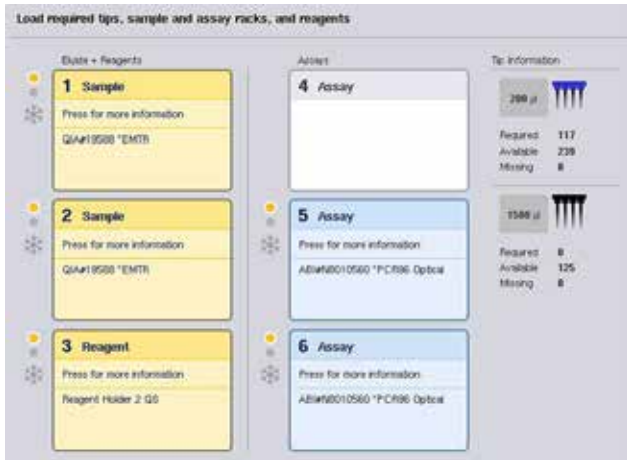


### 12.3.2.5 Loading reagent slots 加载试剂槽

<b>Important</b> <b>重要</b>	<p>Ensure that the correct labware is used. Use of labware that is different to that defined in the <b>Loading Information</b> screen may result in an error during preparation or transfer of the master mix. This could result in damage to the QIASymphony AS.</p> <p>确保使用的器具正确。如果使用的器具与“加载信息”界面内定义的器具不同，可能造成预混液制备或转移时出错。这会对 QIASymphony AS 仪器造成损害。</p>
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To load a reagent adapter with reagents, follow the steps below.  
如要加载试剂适配器和试剂，请按如下步骤操作。

1. Open the “Eluate and Reagents” drawer.  
打开“洗脱物和试剂”抽屉。
2. In the **Assay Setup/Loading information** screen, press the first “Reagents” slot (shown in yellow). The detailed loading information for the slot is shown.  
进入“**检测构建/加载信息**”界面，点击第一个“试剂”槽（显示为黄色）。随即显示该槽的详细加载信息。



3. Place the appropriate precooled reagent adapter onto the defined “Reagent” slot.  
将相应的预冷却试剂适配器放到指定的“试剂”槽上。
4. Press the “Reagent” slot(s) to view detailed information about the required reagents, tubes, and corresponding volumes. The **Loading Reagents** screen appears. A schematic of the reagent adapter that will be used is displayed on the screen.  
点击“试剂”槽，浏览有关所需的试剂、试管和对应的体积的详细信息。随即出现“加载试剂”界面。在该界面内，会显示一份要使用的试剂适配器的原理图。



5. Press an individual position to view loading information for that particular position.  
The position will change from blue to white and detailed information about the reagent, tube type, and volume for that position on the adapter will be displayed in the table.

点击位置,浏览该槽加载信息。该位置会从蓝色变为白色,同时以表格的形式显示与该适配器位置的试剂、试管类型和体积有关的详细信息。



- To view loading information about all reagents for a particular assay, press **List View**.

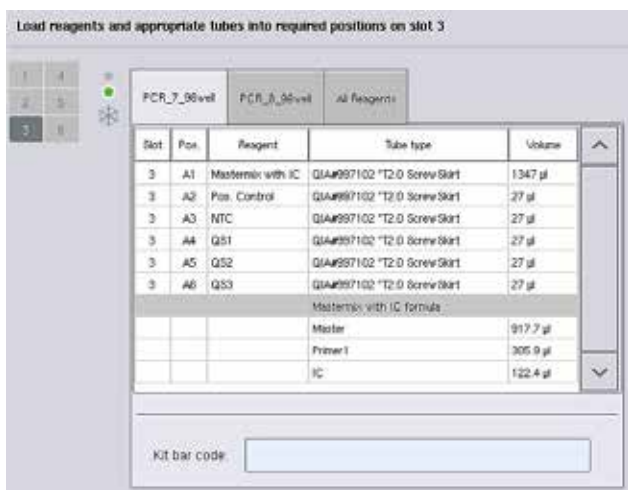
若要浏览与特定检测的所有试剂相关的加载信息,可点击“**列表视图**”。

- Select different assay tabs to see reagent information for the different assays. To view reagents for all assay(s) defined for the run, select **All Reagents**.

选择不同的检测标签,浏览不同检测的试剂信息。若要浏览适用于定义的运行的所有检测试剂,可选择“**全部试剂**”。

If ready-to-use master mix was selected for an Assay Parameter Set, the list contains information about the composition of the master mix, as shown in the screenshot below.

如果为某个检测参数集选择了即用型预混液,则列表中含有预混液成分相关的信息,如下截图所示。



- Load the required reagents and empty tubes in the defined positions.

在定义的位置加载所需的试剂和空的试管。



- Press **Load**The **Assay Setup/Loading information** screen appears again.

The loaded slot is now shown in blue.

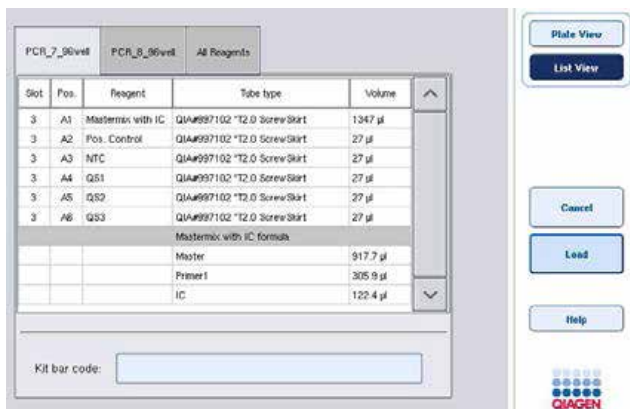
随即再次出现“**检测构建/加载信息**”界面。加载的槽如今显示为蓝色。

See procedures “Entering reagent kit bar codes” and “Defining customized kit bar codes” below. 参见下文所述的“**输入试剂盒条形码**”和“**定义自定义试剂盒条形码**”操作步骤。

**Entering reagent kit bar codes**  
**输入试剂盒条形码**

To enter a reagent kit bar code for each assay, follow the steps below.  
如需输入各个检测的试剂盒条形码，请按如下步骤操作。

1. Switch to **List View**, or press the **Scan Kit Bar Code** button.  
切换至“列表视图”，或点击“扫描试剂盒条形码”按钮。



2. Press the appropriate tab to select an assay.  
点击相应的标签，选择某一检测。
3. Press the **Kit bar code** field.  
点击“试剂盒条形码”字段。
4. Manually enter the bar code, or enter a bar code using the bar code scanner.  
手动输入条形码，或使用条形码扫描仪输入条形码。
5. Press **OK** to return to the **Loading Reagents** screen. If the bar code scanner was used, the **Loading Reagents** screen will automatically reappear.  
点击“OK”返回“加载试剂”界面。如果使用条形码扫描仪，则会再次出现“加载试剂”界面。
6. The software validates the kit bar code of known format and checks the lot number and expiration date.

<b>Important</b> <b>重要</b>	Multiple kit bar codes for one assay must be separated by a semi colon. In this case, validation of lot number and expiration date will not be performed. 一个检测使用多个试剂盒条形码时，必须采用分号分割开来。如为这种情况，就不会验证批号和过期日期。
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<b>Important</b> <b>重要</b>	Entered kit bar codes, including additional information (i.e., expiration date, product number, and lot number), are tracked in the result file. 输入的试剂盒条形码，包括附加信息（即，过期日期、产品编号和批号）均会在
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	结果文件中进行跟踪。
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<b>Important 重要</b>	<p>If the entered kit bar code does not follow a recognized format, a message will appear, asking whether to accept the bar code. Press <b>OK</b> to continue.</p> <p>如果输入的试剂盒条形码不符合可识别的格式，则会出现一条消息，提示是否接受条形码标记。可点击“OK”继续。</p>
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### *Defining customized kit bar codes* **定义自定义试剂盒条形码**

It is possible to use customized kit bar codes. Validation of the lot number and expiration date is performed by QIASymphony SP/AS instruments and is tracked in the result file. The bar code must have the following format (e.g., \*123456;20151231).

您也可使用自定义试剂盒条形码。QIASymphony SP/AS 仪器会执行批号和过期日期验证，并记录在结果文件中。条形码标记采用以下格式（例如，\*123456;20151231）。

*	Start delimiter
<b>n x digits</b>	Lot number
;	Delimiter
<b>yyyymmdd</b>	Expiration date

It is possible to use other kit bar codes. After entering the bar code, validation of the lot number and expiration date is not performed. The bar code is tracked in the result file.

您也可使用其他试剂盒条形码。输入条形码后，不会进行批号和过期日期验证。条形码会记录到结果文件中。

#### **12.3.2.6 Loading disposable filter-tips** **加载一次性带滤芯吸头**

Up to 6 tip racks can be placed in the “Eluate and Reagents” drawer and the “Assays” drawer (i.e., a total of 12 tip racks). Tip rack position, tip type, and number of tips are detected during the inventory scan. The number of tips required varies depending on the assay(s) being run.

在“洗脱物和试剂”抽屉和“检测”抽屉中至多可放入 6 个吸头架（即，至多总计可放入 12 个吸头架）。库存扫描期间，会检测吸头架的位置、吸头类型以及吸头数目。根据正在运行的检测，所需的吸头数目可能不同。

Three different types of disposable filter-tips can be used on the QIASymphony AS — 50 µl, 200 µl, and 1500 µl. Tip information is displayed on the right side of the **Loading Information** screen. For each tip type, the number of required, available, and missing tips is listed. QIASymphony AS 上可使用三种不同类型的一次性带滤芯吸头：50 µl、200 µl 和 1500 µl 规格。吸头信息显示在“加载信息”界面的右侧。针对各个吸头类型，其中列出了所需、可用和缺失的吸头数目。

We recommend that you load more tips than the actual number of required tips calculated by the software. This is because filter-tip consumption can be affected by some processes on the QIASymphony AS (e.g., liquid-level detection).

我们建议您加载的吸头数目超过软件计算出的所需吸头数，这是因为带滤芯吸头消耗量可能会受到 QIASymphony AS 上的部分操作过程（例如，液位检测）影响。

Tip Information	
50 µl	
Required	47
Available	44
Missing	3
200 µl	
Required	6
Available	147
Missing	0
1500 µl	
Required	0
Available	123
Missing	0

<b>Important</b> <b>重要</b>	The number of individual tips is displayed, and not the number of tip racks. 显示的是单独的吸头数目，而非吸头架的数目。
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<b>Important</b> <b>重要</b>	The number of available tips is calculated by the software based on the previous run and inventory scan. If the number of available tips does not correspond with the number of required tips, a message will appear during the inventory scan. 可用的吸头数目由软件根据之前的运行及库存扫描计算出来。如果可用的吸头数目与所需的吸头数目不对应，则会在库存扫描时出现一条消息。
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To load a disposable filter-tip rack, follow the steps below.  
如要加载一次性带滤芯吸头架，请遵照如下步骤操作。

1. If not already open, open the “Eluate and Reagents” and/or the “Assays” drawer.  
如果“洗脱物和试剂”和/或“检测”抽屉未打开，将其打开。
2. Hold the tip rack with 2 fingers, using the grips.  
用夹持器的两根卡爪夹持住吸头管架。
3. Gently squeeze the tip rack and place it into a tip rack slot.

<b>Important</b> <b>重要</b>	Ensure that the tip racks are properly seated in the tip rack slot so that the tip racks will be identified during the inventory scan. 请确保吸头架已正确安装到吸头架槽内，以确保库存扫描期间可以识别吸头架。
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### 12.3.3 Checking cooling temperatures 检查冷却温度

Cooling temperatures are shown in an overview screen.  
冷却温度显示在概览界面中。

Press the **Cooling** button in the **Loading information** screen. The **Temperature Status** screen appears.

点击“加载信息”界面内的“冷却”按钮。随即显示“温度状态”界面。

The QIASymphony AS automatically starts cooling after the adapters have been loaded virtually on the touchscreen. The current temperature of the cooling positions is updated in real time. If the current temperature is outside the target temperature, the slot will appear yellow. If the current temperature is within the target temperature the slot will appear green.  
在将适配器已经加载到触摸屏上，QIASymphony AS 会自动开始冷却。冷却位置当前的温度会实时更新。如果目前的温度超过目标温度，则槽变为黄色。如果目前温度在目标温度范围内，则槽变为绿色。

The target temperature is defined in the assay definition and cannot be changed using the touchscreen.

目标温度在检测定义中定义，无法使用触摸屏更改。

The cooling settings for “Sample”, “Reagents”, and “Assay” slots can be switched on, if the rack is not yet loaded (precooling).

如果管架尚未加载，可以开启“样本”、“试剂”和“检测”槽的冷却设置。

<b>Important</b> <b>重要</b>	The temperature of the cooling positions throughout an assay run is documented in the result file. 整个检测运行的冷却位置温度记录在结果文件中。
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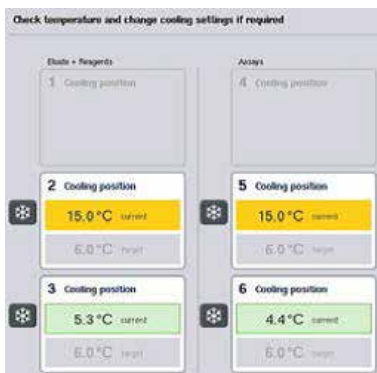
To switch cooling on, follow the steps below.  
如要开启冷却功能，请按照如下步骤操作。

1. Press the snowflake button to the left of the cooling position to be switched on.

点击冷却位置左侧的雪花按钮开启冷却功能。

Cooling for that position will be switched on, and the slot will appear black.

该位置的冷却功能将开启，随后槽变为黑色。



2. To switch cooling off again, press the snowflake button to the left of the cooling position to be switched off.

The snowflake button will appear gray.

雪花按钮会变为灰色、

<b>Important</b> <b>重要</b>	When a Rotor-Disc is assigned as an assay rack, slots 4–6 are covered with the Rotor-Disc Adapter Base Unit QS. Therefore only one snowflake button is necessary and visible for slots 4–6. 当 Rotor-Disc 作为检测管架进行分配时，槽 4-6 被 Rotor-Disc 适配器基础单元 QS 所占据。因此，对于槽 4-6，只有一个化学按钮是必需的、可见的。
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<b>Important</b> <b>重要</b>	If a rack is loaded, cooling cannot be switched off. 加载管架后，冷却功能无法关闭。
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### 12.3.4 Starting an integrated run

#### 启动集成运行

1. Press **Run** in the **Integrated Run** screen.

点击“集成运行”界面内的“运行”。



2. The status of an integrated run can be viewed in the **Integrated Run View** screen.

集成运行的状态可在“集成运行视图”界面观察。

### 12.3.5 Removing assays after an AS run

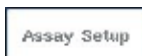
#### AS 运行后移除检测

When an assay run is completed or canceled, the assays must be removed from the “Assays” drawer. The assays will not be automatically removed from the QIA Symphony AS. 检测运行完成或取消后，必需从“检测”抽屉中移除检测。检测不会自动从 QIA Symphony AS 中移除。

If the status of a run is shown as **QUEUED**, **STOPPED**, or **COMPLETED**, the assay rack(s) and adapter(s) can be removed.

如果运行状态显示为“排队”、“停止”或“完成”，则可以移除检测架和适配器。

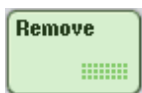
1. Press the **Assay Setup** tab to access the **Assay Setup/Overview** screen.



The **Assay Setup** screen will open.

点击“检测构建”标签，进入“检测构建/概览”界面。

随即打开“检测构建”界面。



2. Press **Remove** in the **Assay Setup/Overview** screen.

点击“检测构建/概览”界面内的“移除”。

A message will be displayed that this will stop the cooling for all slots.

随即会显示一条消息，提示这一操作会停止所有槽的冷却。

3. Press **Yes**. Cooling is now switched off for all slots.

点击“是”。所有槽的冷却功能现在关闭。



Cooling for the eluate rack(s) is also switched off at this point. In an integrated run, the eluate rack is moved back to the QIASymphony SP and is cooled there.

此时洗脱管架的冷却功能关闭。在集成运行过程中，洗脱架移回到 QIASymphony SP，并在此冷却。

4. Open the “Assays” drawer and the “Eluate and Reagents” drawer. The **Assay Setup/Loading Information** screen appears.

打开“检测”抽屉和“洗脱物和试剂”抽屉。随即出现“检测构建/加载信息”界面。

5. Physically remove all racks, including the assay rack(s).

移除所有管架，包括检测管架。

6. Close the “Assays” and the “Eluate and Reagents” drawers.

关闭“检测”和“洗脱物和试剂”抽屉。

7. In the **Assay Setup/Loading Information** screen, press **Cancel**. The **Overview** screen is opened.

进入“检测构建/加载信息”界面，点击“取消”。随即打开“概览”界面。



If more QIASymphony AS runs are to be performed, proceed with loading the next QIASymphony AS run.

如果有多轮 QIASymphony AS 需要执行，则继续加载下一轮 QIASymphony AS 运行。

<b>Important</b> <b>重要</b>	The loading instructions for the next QIASymphony AS run are already displayed. It is possible but not necessary to proceed with loading the next batch now. 下一轮 QIASymphony AS 运行的加载方法已经显示出来。现在您可以，但不必继续加载下一批次。
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<b>Important</b> <b>重要</b>	In integrated mode, the sample rack staying in the QIASymphony SP cannot be removed in this step. 在集成模式下，停留在 QIASymphony SP 中的样本架无法在这一操作步骤中移除。
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### 12.3.6 Procedure after run completion

#### 运行停止后的操作步骤

After the inventory scan is performed and the **Assay Setup/Loading Information** screen appears again, follow the steps below.  
进行库存扫描后，再次出现“**检测构建/加载信息**”界面，请遵照下述步骤操作。

1. Remove the eluate rack(s), including adapter(s), from the “Eluate” drawer of the QIASymphony SP.  
从 QIASymphony SP 的“洗脱物”抽屉上移除洗脱管架，包括适配器。
2. Remove the reagent tube(s) and bottles, including adapter(s).  
移除试剂试管和试剂瓶，包括适配器。
3. Replace the tip disposal bag after each run.

### 12.3.7 Pausing, resuming, and stopping an integrated run

#### 暂停、恢复和停止集成运行

#### 12.3.7.1 Pausing a QIASymphony SP or a QIASymphony AS run

##### 暂停 QIASymphony SP 或 QIASymphony AS 运行

A run on the QIASymphony SP or the QIASymphony AS can be paused by pressing the **Pause SP** or **Pause AS** button in the **Integrated Run** screen. If a QIASymphony SP or a QIASymphony AS run is paused, the pipetting step is completed before the run pauses.

点击“集成运行”界面下的“暂停 SP”或“暂停 AS”按钮，可以暂停 QIASymphony SP 或 QIASymphony AS 上正在进行的运行。QIASymphony SP 或 QIASymphony AS 上的运行暂停，则会在暂停前先完成当前正在处理的移液步骤。

The screen below is displayed when the **Pause SP** or **Pause AS** button is pressed.  
按下“暂停 SP”或“暂停 AS”按钮后，即会显示这一界面。



If the run is paused, two options are available: the run can be resumed or stopped.  
运行暂停后，有两个选项可用：恢复或停止。

<b>Important</b> <b>重要</b>	<p>Pausing a run interrupts the sample preparation or assay setup procedure and may affect the performance.</p> <p>暂停运行会中断样本制备或检测构建操作，会影响到实验性能。</p>
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<b>Important</b> <b>重要</b>	<p>Only pause a run in an emergency.</p> <p>仅在紧急情况下需要暂停运行。</p>
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<b>Important</b> <b>重要</b>	<p>Processed samples will be flagged as “unclear” as soon as the QIAAsymphony SP or QIAAsymphony AS is paused and the run is resumed.</p> <p>QIAAsymphony SP 或 QIAAsymphony 暂停及恢复后，处理的样本会被标上“不定”标签。</p>
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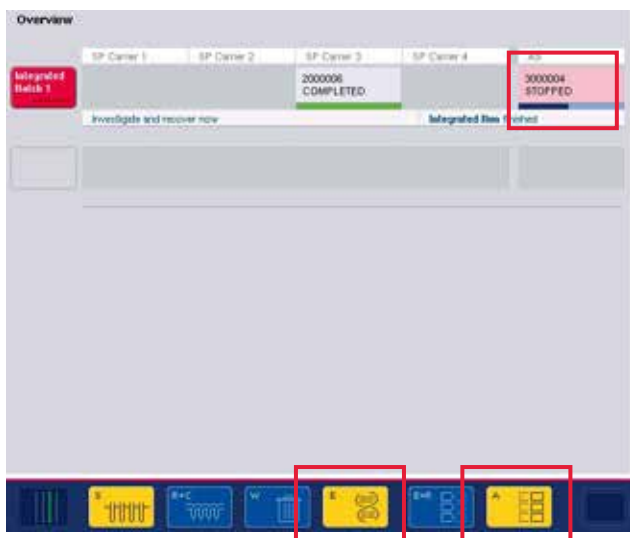
### 12.3.7.2 Resuming a run 恢复运行

To resume a run, press the **Continue SP** or **Continue AS** button. Processed samples will be flagged as “unclear” as soon as the QIAAsymphony SP/AS is paused and continued.  
如要恢复运行，可点击“继续 SP”或“继续 AS”按钮。一旦 QIAAsymphony SP/AS 暂停之后继续，处理的样本均会被标记为“不定”。

### 12.3.7.3 Stopping a run

#### 停止运行

If a QIASymphony SP or QIASymphony AS run is paused, press the **Stop SP** or **Stop AS** button to stop the integrated run. On pressing **Stop SP**, all batches currently being processed will be stopped, although AS batches previously started will be completed. On pressing **Stop AS**, all SP batches currently being processed will be completed. 如果 QIASymphony SP 或 QIASymphony AS 运行暂停，则请点击“停止 SP”或“停止 AS”按钮停止集成运行。在点击“停止 SP”之后，目前处理的所有批次均将停止，尽管之前开始的 AS 批次可能并未完成。点击“停止 AS”后，所有当前处理的批次将会完成。



If the run is stopped, all processed samples are flagged with “invalid”. It is not possible to process these samples further.

如果运行停止，所有处理的样本均会被标记为“无效”。此时无法继续处理这些样本。

After stopping a QIASymphony SP or a QIASymphony AS run or if the run stops due to an error, the buttons of the affected drawers flash. Press the flashing button(s) to display the warning or error messages

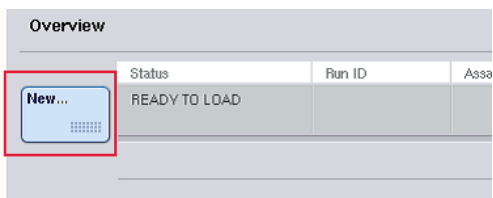
停止 QIASymphony SP 或 QIASymphony AS 运行后，如果运行由于错误停止，则相关的抽屉按钮闪烁。点击闪烁的按钮，显示警告或错误消息。

## 12.4 Independent run 独立运行

### 12.4.1 Defining an independent assay run 定义独立检测运行

To start the assay definition process, press the light blue **New** button in the assay setup **Overview** screen.

如要开始检测定义流程，可按下检测构建“概览”界面内的淡蓝色“新建”按钮。



#### 12.4.1.1 Defining “Sample” slots and assigning sample racks 定义“样本”槽和分配样本管架

By default, slot 2 is defined as a “Sample” slot. This cannot be changed. Slot 2 is automatically preselected in the **Sample Rack(s)** screen and is highlighted dark yellow.

默认情况下，槽 2 定义为“样本”槽。这一设置无法更改。槽 2 会在“样本管架”界面内自动预先选定，同时黄色高亮显示。

Slot 1 is by default defined as a “Reagents” slot. If required, slot 1 can be redefined to create an additional “Sample” slot.

槽 1 默认定义为“试剂”槽。如有需要，可重新定义槽 1，创建额外的“样本”槽。

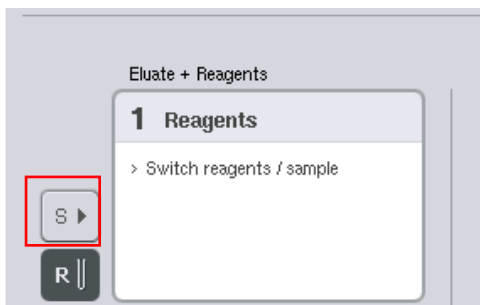
Each “Sample” slot must be assigned a rack type and a rack ID. If a rack file is available, a rack type and rack ID will be automatically assigned when the rack file is assigned to the “Sample” slot. If no rack file is available, the rack type and rack ID must be manually assigned.

每个“样本”槽必须分配一个管架类型和一个管架 ID。如果有可用的管架文件，则在将管架文件分配到“样本”槽时，会自动分配管架类型和管架 ID。如果无管架文件可用，则必须手动分配管架类型和管架 ID。



#### 12.4.1.2 Defining an additional “Sample” slot 定义额外的“样本”槽

1. Press the **S** button to the left of slot 1 in the **Sample Rack(s)** screen.  
点击“样本管架”界面内的槽 1 左侧的 S 按钮。



The “Reagents” slot will then switch to a “Sample” slot. This slot will be automatically selected and will be highlighted dark yellow.

“试剂”随后将会切换至“样本”槽。该槽会自动被选定，并黄色高亮显示。

2. To switch slot 1 from a “Sample” slot back to a “Reagents” slot, press the **R** button.

#### 12.4.1.3 Assigning a rack type

If a rack file will not be used, each defined “Sample” slot must be assigned a rack type. To assign a rack type, follow the steps below.

1. Press a “Sample” slot to select it. A selected “Sample” slot is highlighted dark yellow.
2. Select a rack type from the **Select rack type** list.

The selected rack type will be assigned to the selected "Sample" slot(s).

#### 12.4.1.4 Assigning sample rack ID(s) 分配样本管架 ID

If a rack file will not be used, each defined "Sample" slot must be assigned a rack ID.  
如果不使用管架文件，各个定义的“样本”槽必须分配一个管架 ID。

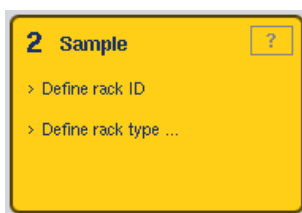
A rack ID can be assigned manually or automatically. The assigned rack ID will be used to create a rack file. The name of the rack file has the format **RackFile\_rack ID**.  
管架可以手动或自动分配。分配的管架 ID 将会用于创建管架文件。管架文件的格式为 **RackFile\_rack ID**。

<b>Important</b> <b>重要</b>	Be aware that some symbols may not be used in the rack file name and some symbols will be converted. 请注意，部分符号不会在管架文件中使用，部分符号会转化后显示。
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<b>Important</b> <b>重要</b>	If the rack type is changed after a rack ID has been entered the rack ID will remain the same. 如果在输入管架 ID 之后更改检测管架类型，则管架 ID 仍相同。
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*Manually assigning a sample rack ID*  
**手动分配样本管架 ID**

1. Select a "Sample" slot.  
选择“样本”槽。



2. Press **Rack ID**. The **Manual Input** screen will appear.  
点击“管架 ID”。随即出现“手动输入”界面。

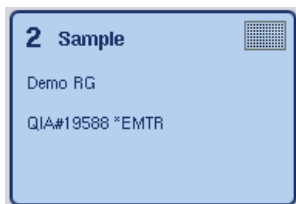
3. Manually enter a rack ID using the **Keyboard**. Alternatively, use the bar code scanner to enter a rack ID.  
通过“键盘”手动输入检测管架 ID。也可使用条形码扫描仪输入管架 ID。
4. Press **OK** to return to the **Sample Rack(s)** screen.



The entered rack ID will appear. If a rack type has already been assigned to the “Sample” slot, the slot will now appear blue.

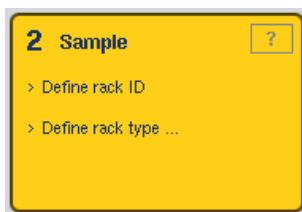
点击“OK”返回“样本管架”界面。

随即出现输入的检测管架 ID。如果该“样本”槽已经分配了管架类型，则该槽会显示为蓝色。



*Automatically assigning a sample rack ID*  
**自动分配样本管架 ID**

1. Select a “Sample” slot.  
选择“样本”槽。



2. Press **Automatic ID**.

The software automatically assigns an ID in the format **SlotNo.\_RunID\_Suffix** (e.g., S2\_1000002\_000).

点击“自动 ID”。

软件会自动分配一个 **SlotNo.\_RunID\_Suffix** (例如, S2\_1000002\_000) 格式的 ID。



3. A rack ID is automatically assigned to the selected “Sample” slot(s). If a rack type has already been assigned to the “Sample” slot(s), the slot(s) will now appear blue.系统会自动为选定的“样本”槽分配一个管架 ID。如果该“样本”槽已经分配了管架类型，则该槽会显示为蓝色。

#### 12.4.1.5 Assigning a rack file 分配管架文件

1. Press a “Sample” slot to select it. Ensure that only one “Sample” slot is selected. A selected “Sample” slot is highlighted dark yellow.

点击“样本”槽将其选定。确保仅一个“样本”槽被选定。选中的“样本”槽会黄色高亮显示。



2. To deselect a “Sample” slot, press it. It will then appear pale yellow.  
如要取消选择“样本”槽，可点击此按钮。此后，其变为淡黄色。

3. Press **Rack Files**.

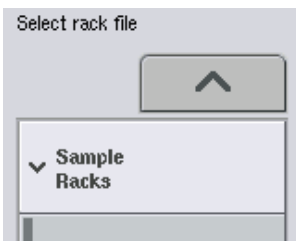
点击“管架文件”。



The **Select rack file** list appears.

随即出现“选择管架文件”列表。

4. Press a rack file to select it from the list.  
点击某个管架文件，从列表中将其选中。



There are 2 types of rack files — **Sample Racks** and **Assay Racks**. **Sample Racks** are standard sample rack files for defining an assay run. In some cases, the assay rack can be used as a sample rack (e.g., for setting up two-step RT-PCR assays). In this case, an **Assay Rack** can be selected.

共有两种类型的管架文件 – “样本管架”和“检测管架”为定义检测运行的标准管架文件。在部分情况下，检测管架可用作样本管架（例如，用于设置两步法 RT-PCR 检测）。这种情况下，可以选择“检测管架”。

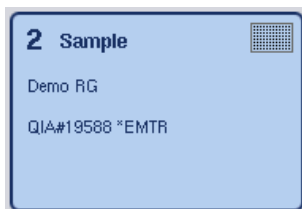
5. When the assay rack file is selected, an information message appears.

Press **Yes** to continue.

选中检测管架文件后，随即出现一条提示消息。

点击“是”继续。





The selected rack file will be assigned to the selected “Sample” slot. The rack type and rack ID that are defined in the selected rack file will be assigned to the selected “Sample” slot. The “Sample” slot will now appear blue and the **Next** button becomes active.

选中的管架文件会自动分配给选定的“样本”槽。在选中的管架文件中定义的管架类型和管架 ID 会自动分配到选定的“样本”槽。“样本”槽现在变为蓝色，“下一步”按钮激活。

#### 12.4.2 Defining/checking sample rack(s)

##### 定义/检查样本管架

Once rack file(s) and rack type(s) have been assigned to “Sample” slot(s), the positions of samples and controls and the associated volumes must be defined. 将管架文件和管架类型分配到“样本”槽后，必须定义样本和对照的位置以及相应的体积。

1. Press **Next** in the **Sample Rack(s)** screen.

点击“**样本管架**”之中的“**下一步**”。

2. The **Sample Rack Layout** screen appears.

随即出现“**样本管架布局**”界面。

This screen displays a schematic of the sample rack in the selected “Sample” slot. If two “Sample” slots were defined, the **Slot 1** and **Slot 2** buttons can be used to switch between views of the two “Sample” slots.

此界面显示有选定“样本”槽内的样本管架的原理图。如果定义了两个“样本”槽，“槽 1”和“槽 2”按钮可用于在两个“样本”槽的视图间切换。

If rack file(s) were assigned, sample positions, extraction controls, and volumes are already defined and are displayed in the sample rack layout. It is only possible to modify the sample volumes. This may be necessary if some eluate was manually removed from the rack before being placed on the QIA Symphony AS. It is not possible to define additional sample positions. 如果分配了管架文件，则管架位置、提取对照和体积均已定义并显示在样本管架布局中。您仅可修改样本体积。如果部分洗脱物已经在管架放在 QIA Symphony AS 上之前从管架中手动移除，这一步骤可能是必需的。此时，无法再定义其他样本位置。

If rack file(s) were not assigned, sample positions, control positions, and volumes must be manually defined. When a rack file has not been assigned it is also possible to edit the sample IDs.

如果未分配管架文件，则必须手动定义管架位置、提取对照和体积。未分配管架文件时，还可以编辑样本 ID。

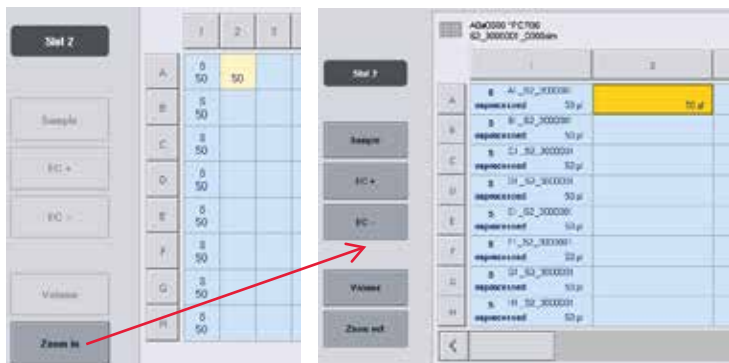
<b>Important</b> <b>重要</b>	<p>Samples and/or extraction controls that have been processed on the QIASymphony SP and marked as "invalid" are marked in red. These "invalid" sample and extraction controls cannot be processed by the QIASymphony AS and cannot be selected by the user in the <b>Assay Assignment</b> screen. In the <b>Assay Assignment</b> screen, any "invalid" samples appear as an empty well.</p> <p>已经在 QIASymphony SP 上处理并且标记为“无效”的样本和/或提取对照，标记为红色。此类“无效”的样本和提取对照无法通过 QIASymphony AS 处理，且用户不可在“检测分配”界面中将其选中。在“检测分配”界面，任何“无效”的样本均显示为空孔。</p>
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<b>Important</b> <b>重要</b>	<p>If an assay rack file is being used as a sample rack file the abbreviations used for assay standards (Std), no template controls (NTC, NTC+IC, NTC-IC; where IC is internal control), and assay controls (AC) are not displayed — only the volume is visible. Press the position (pale yellow) to select it, and then select <b>Sample, EC+ or EC-</b> to define the sample type (where EC is extraction control)</p> <p>如果某个管架文件正被用作样本管架文件，则不会显示缩写的检测标准品(Std)、无模板对照 (NTC、NTC+IC、NTC-IC；其中 IC 表示内参) 和检测对照(AC)。</p>
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The **Next** button becomes active after sample positions and volumes have been assigned to the sample rack.

将样本位置和体积分配到样本管架之后，“下一步”按钮激活。

3. Press **Zoom in** to view the name of sample IDs.



<b>Important</b> <b>重要</b>	<p>Small fluctuations in the expected volume of eluate are dependent on the QIAAsymphony SP protocol. This means that the maximum number of reactions that can be set up per sample may no longer correspond to the available volume of eluate.</p> <p>所需的洗脱物提及的小差异取决于具体的 QIAAsymphony SP 程序。这就表示，反应的最大数目可以根据样本设置，不在于可用的洗脱物体积相对应。</p>
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#### 12.4.2.1 Selecting positions in the sample rack

##### 选择样本架中的位置

Before samples, controls, and volumes can be defined, positions in the sample rack must be selected.

定义样本、对照和体积之前，必须选择样本管架内的位置。

To select individual position(s), press individual position(s) in the rack.

如要选择单独的位置，可点击管架内的个别位置。

To select a complete column or row, press the number or letter that is associated with that particular column or row.

如要选择整列或整行，可以点击特定列或行对应的数字或字母。

To select all positions, press **Select All**.

如要选择所有位置，可点击“全选”。

To select a block of positions, press one position and drag your finger to select other adjacent positions.

如要选择位置区间，可以点击一处位置并用手指拖动，从而选择临近的其他位置。

<b>Important</b>	Selected positions appear dark blue.
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**重要**

选中的位置显示为深蓝色。

### 12.4.2.2 Define sample positions and extraction controls

#### 定义样本位置和提取对照

If a rack file has not been assigned, sample positions must be defined. To define sample positions, follow the steps below.

如果尚未分配管架文件，则必须定义样本位置。定义样本位置时，请按如下步骤操作。

1. Select position(s) that contain samples

选中含有样本的位置。



2. Press **Sample**, **EC+**, or **EC-** to assign samples or extraction controls to the selected positions.

点击**样本**、**EC+**或**EC-**向选中的位置分配样本或提取对照。

An **S**, **EC+**, or **EC-** will appear in each selected position. These positions will appear yellow and will be automatically deselected

随即会在各个选中的位置出现 **S**、**EC+**或**EC-**。这些位置将会显示为黄色，并会自动取消选中。

	1	2
A	S	S
B	EC-	EC+

3. To delete position(s) that have been assigned, select the position(s) and press **Clear**.

Clear

如要删除已经分配的位置，可选中位置并点击“**清除**”。

### 12.4.2.3 Modifying/defining sample volumes

#### 修改/定义样本体积

The volume in each position of a sample rack is not checked during the inventory scan; therefore it is important that manually defined volumes are accurate. 库存扫描期间，不会检查样本管架各个位置的体积。因此，必须确保手动定义的体积精确。

1. Select the position(s) to be defined or modified in the displayed sample rack.  
在显示的样本管架中选择想要定义或修改的位置。



2. Press **Volume**.  
点击“**体积**”。



The **Manual Input** screen appears.  
随即出现“**手动输入**”界面。

3. Enter a volume using the **Keyboard** screen.  
使用“**键盘**”界面输入体积。



**Note:** 0 µl is not a valid volume. If a sample position contains no sample volume, clear the sample assignment from this position (see below).  
注意：0 µl 不是有效的体积。如果某个样本位置无样本体积，则从此位置清除样本分配（参见下文）。

4. Press **OK**.  
点击“**OK**”。



The **Sample Rack Layout** screen appears and the updated volume(s) will be displayed.

随即出现“**样本管架布局**”界面，同时显示更新后的体积。



5. To delete entries for particular sample position(s), select the sample position(s) and press **Clear**.

如要删除特定样本位置的条目，可选中该样本位置并点击“清除”。

<b>Important</b> <b>重要</b>	<p>If a sample position contains no sample volume, clear the sample assignment from this position. To do this, select the sample position in the <b>Sample Rack Layout</b> screen, and press <b>Clear</b>. When a rack file is used, it is not possible to clear a sample assignment.</p> <p>如果某个样本位置无样本体积，则从此位置清除样本分配。为此，可选中“样本管架布局”界面中的样本位置，然后点击“清除”。使用某个管架文件时，无法清除样本分配。</p>
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#### 12.4.2.4 Viewing and editing sample IDs 浏览和编辑样本 ID

Samples are automatically assigned default IDs based on their position, slot number, and run ID (e.g., **B1\_S2\_10000061**). Extraction controls are also marked as **EC+** or **EC-**. To view the sample IDs, press **Zoom In**. Use the arrow buttons to scroll through the sample rack.

样本会根据自己的位置、槽编号以及运行 ID 自动分配默认的 ID（例如，**B1\_S2\_10000061**）。提取对照还会带有 **EC+**或 **EC-**标记。如要浏览样本 ID，可点击“放大”。您可使用箭头按钮在样本管架中滚动。

If desired, the automatically assigned sample IDs can be edited.  
如果需要，您也可编辑自动分配的样本 ID。

<b>Important</b> <b>重要</b>	<p>If a rack file was used, the sample IDs cannot be modified.</p> <p>如果使用管架文件，则无法修改样本 ID。</p>
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#### 12.4.2.5 Modifying a sample ID 修改样本 ID



1. Press **Zoom In**. An enlarged view of the sample positions will appear.

点击“放大”。随即出现一份放大的样本位置视图。



2. Press the **Tools** tab.

点击“工具”标签。

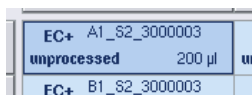
The **Tools** menu will be displayed.

随即显示“工具”菜单。





- Use the arrows to scroll across the sample positions.  
使用箭头按钮在不同样本位置间滚动。



- Select a sample position by pressing it. The selected position will appear dark blue.  
点击某个样本位置，将其选择。选中的位置会显示为深蓝色。

- Press **Sample ID**.  
点击“样本 ID”。



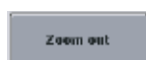
The **Manual Input** screen will appear.  
随即出现“手动输入”界面。

- Enter a sample ID using the keyboard, or enter a sample ID using the bar code scanner.  
使用键盘输入样本 ID，或者使用条形码扫描仪输入样本 ID。

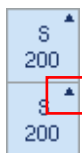


- Press **OK**.  
点击 **OK**。

- Repeat steps 1–6 for all sample IDs that need to be modified.  
针对所有需要修改的样本重复步骤 1-6。



- To return to the original view, press **Zoom Out**.



Sample positions with modified sample IDs will be marked with a small triangle in the top right corner  
如要返回原始视图，请点击“放大”。  
具有修改的样本 ID 的样本位置将会在右上角用一个小三角形标记出来。

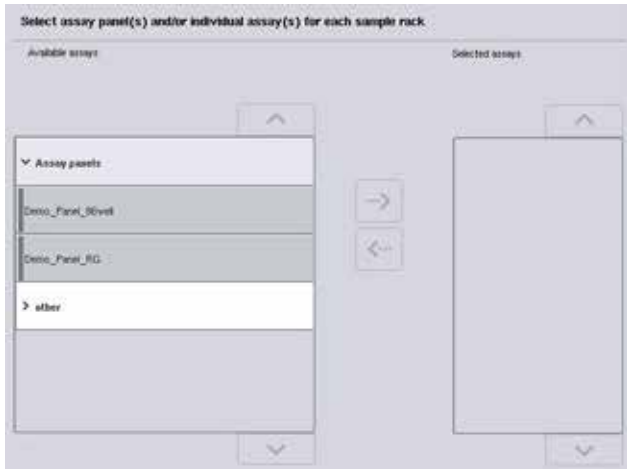
### 12.4.3 Defining assay(s) to be processed in the run 定义要在运行中处理的检测

To define which assay(s) will be processed in the run, press **Next** in the **Sample Rack Layout** screen.

如要定义将要在运行中处理的检测，可点击“样本管架布局”界面中的“下一步”。

The **Assay Selection** screen appears. **Assay panels** and Assay Parameter Sets can be selected using this screen.

随即出现“检测选择”界面。在此界面中，可以选择“检测面板”和检测参数集。



An Assay Parameter Set contains all information relating to an assay (e.g., number of replicates, assay controls, and assay standards). Each Assay Parameter Set references an Assay Definition file. The Assay Definition defines the assay workflow, reagents, and pipetting specifications. In addition, an Assay Parameter Set can reference a Normalization Definition file, if the assay uses normalization. The Normalization Definition defines the reagents and pipetting specifications for the normalization step.

检测参数集中含有与检测相关的所有信息（例如，重复、检测对照和检测标准品的数目）。每个检测参数集援引一个检测定义文件。检测定义确定了检测的工作流程、试剂和移液规范。此外，奸恶参数集还可援引标准化定义文件（如果检测使用标准化功能）。标准化定义确定了标准化步骤的试剂和移液规范。

It is possible to perform several different assays in the same run, but only if the Assay Parameter Sets use the same output format. The number of replicates in an Assay Parameter Set, including the number of assay standards and controls for specific assays, can be defined/modified using the touchscreen. The parameters can also be modified using the **Process Definition** editor tool of the QIASymphony Management Console.

您可以在同一运行中进行多项不同的检测，但前提是检测参数集使用相同的输出格式。检测参数集中的重复数目（包括用于特定检测的检测标准品和对照的数目）可以通过触摸屏进行定义/修改。这些参数可使用 QIASymphony 管理控制台的过程定义编辑工具进行修改。

For more information, refer to Section 14.7 of the *QIASymphony Management Console User Manual*.

更多信息，请参阅 QIASymphony 管理控制台用户手册第 14.7 节。

Assay Parameter Sets can be grouped into assay panels. A single Assay Parameter Set can be a member of more than one assay panel. When an assay panel is selected, all related Assay Parameter Sets are selected and displayed in the **Selected assays** list. If one of the related assays should not be processed it has to be deselected manually.

检测参数集可以分组到不同的检测面板。单个检测参数集可以为多个检测面板之中的一员。如果选择了检测面板，则所有相关的检测参数集也将被选中并显示在“**选中的检测**”列表中。如果有多个检测需要处理，必须手动取消选择。

In addition, Assay Parameter Sets can be sorted into different categories. All available panel(s) and categories are listed in the **Available assays** list. All Assay Parameter Sets that are not part of a category are listed in **Other**. 此外，检测参数集可以分成不同的类别。所有可用的面板和类别均列在“**可用的检测**”列表中。所有检测参数集均不属于“**其他**”下面所列的类别。

#### 12.4.3.1 Selecting Assay Parameter Sets

##### 选择检测参数集

Assay Parameter Sets can be assigned manually or using work list(s). 检测参数集可以手动分配或通过工作列表分配。

A work list defines which samples should be processed by which Assay Parameter Sets. If at least one work list is available for the defined sample IDs, the **Work List** mode is used by default. 工作列表定义了检测参数集要处理的样本。如果至少有一个工作列表可供定义的样本 ID 使用，则默认使用“**工作列表**”模式。

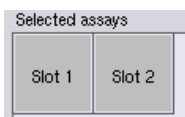


The **Work Lists** button is then active and appears dark blue. 随后，“**工作列表**”按钮激活，显示为深蓝色。

Only Assay Parameter Sets that are defined by the work list are displayed in the **Available assays** list.

只有工作列表定义的检测参数集才会显示在“**可用的检测**”列表中。

If a work list is not available, or if assays that are not specified in a work list need to be processed, assay panels and individual assays can be selected manually. 如果工作列表不可用，或者未在工作列表中指定需要处理的检测，则可手动选择检测面板和单独的检测。



1. If more than one "Sample" slot is defined, select the slot that you want the assays to be assigned to using the tabs at the top of the **Selected assays** list. If you want the assays to be assigned to both slots, press the **Slots 1/2** tab.

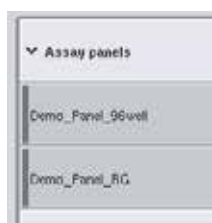
如果定义了多个“样本”槽，则通过“选中的检测”列表上方的标签选择您希望分配检测的槽。如果您希望同时将检测分配到两个槽，则点击“槽 1/2”标签。

2. Press assay panels or individual assays from the **Available assays** category to select them.

点击“可用的检测”类别中的检测面板或单独的检测，将其选中。

Assays can be divided into sections (e.g., **Assay panels** and **other**), but these can be modified using the **Process Definition** editor tool of the QIASymphony Management Console.

检测可进行分段（例如，“检测面板”和“其他”），但这些内容可以通过 QIASymphony 管理控制台的“过程定义”编辑器工具进行修改。



3. Press the desired assay panel.

点击所需的检测面板。

All related assay parameter sets are displayed.

随即显示所有相关的检测参数集。

4. Press the right pointing arrow in the center of the screen to move the selected assay panel.

点击界面中心的向右箭头按钮，移动选中的检测面板。

All Assay Parameter Sets related to the selected assay panel will automatically be displayed in the **Selected assays** list.

所有与选中的检测面板相关的检测参数集均会显示在“选中的检测”列表中。



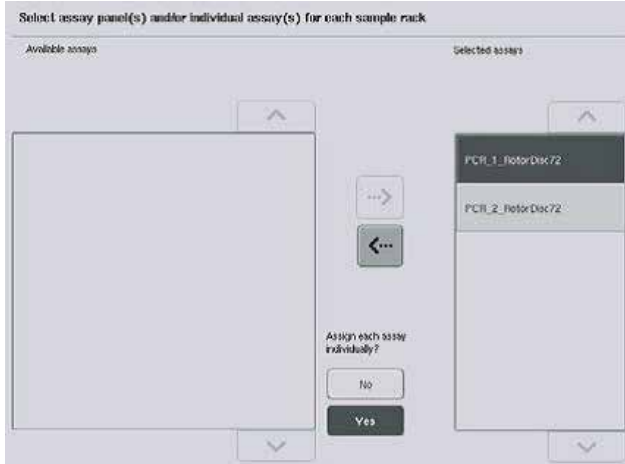
<b>Important</b> <b>重要</b>	<p>If you do not want to process any of these listed assays, press the assay to select it, and then press the left pointing arrow. The assay will be deselected and will be removed from the <b>Selected assays</b> list.</p> <p>如果您不希望处理任何所列的检测，可点击这些检测将其选中，然后点击向左箭头。这些检测将会从选中内容中去除，并将从“选中的检测”列表中删除。</p>
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Assigning selected assays to sample positions

将选中的检测分配到样本位置

If more than one Assay Parameter Set is selected in the **Assay Selection** screen, the **Assign each assay individually?** option appears.

如果通过“**检测选择**”界面选择了多个检测参数集，随即显示“单独分配每个检测”选项。



**Yes** is selected by default.

默认选择“是”。

This means that the selected Assay Parameter Sets have to be individually assigned to sample positions in a sample rack (i.e., each Assay Parameter Set does not have to be assigned to every sample).

这表示必须将所选检测参数集单独分配至样本管架上的样本位置（即每个检测参数集和每个样本不必一一对应分配）。

If samples are to be processed by all selected Assay Parameter Sets, select **No**.

如果样本要通过所有选中的选检测参数集来处理，则选择“否”。

1. Press **Next** to continue.

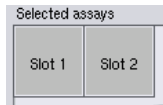
按下“**下一步**”继续。



The **Assay Assignment** screen appears. This screen displays a schematic of the sample rack in the selected “Sample” slot.

随即出现“**检测分配**”画面。该画面显示选中的“样本”槽中的样本管架

示意图。



2. If more than one "Sample" slot is defined, use the **Slot 1** and **Slot 2** buttons to switch between views of the two slots.

如果定义了多个“样本”槽，则使用“槽 1”和“槽 2”按钮来切换两者的视图。



3. Press **Zoom in**.
4. 按下“放大”。

Details for the assay positions are shown, including sample ID and, for an assay with normalization, concentration.

显示检测位置的细节，例如样本 ID 以及检测带正规化时的浓度等。



5. Press **Zoom out**.
6. 按下“缩小”。

Return to the previous view of the **Assay assignment** screen.

返回“检测分配”画面的上一个视图。



7. If a work list(s) is used, Assay Parameter Sets are automatically assigned to samples, as defined in the work list(s).

8. 如果使用工作列表，则按照工作列表的定义，将检测参数集自动分配至样本。

Those samples that have assays assigned to them appear green and are marked with a work list symbol.

在分配检测后样本会呈绿色，并带有工作列表符号标记。



9. To view a detailed overview of each sample position, press **List view**.

10. 要浏览每个样本位置的详细概览，按下“列表视图”。

11. After assigning assays to sample positions, press **Queue** in the **Assay Assignment** screen to proceed with loading the QIASymphony AS.



1. QIASymphony AS.

The **Loading Information** screen appears. The **Queue** button is only active when each Assay Parameter Set has been assigned to at least one position in each "Sample" slot that has been defined.

显示“加载信息”画面。只有在将每个检测参数集分配至每个已经定义的“样本”槽内的至少一个位置后“排队”按钮才会激活。

If a work list is not available, Assay Parameter Sets must be manually assigned to samples.

如果工作列表不可用，则必须将检测参数集手动分配至样本。

Only samples that have assays assigned to them will be processed in the assay setup run.

只有分配了检测的样本会在检测构建序列中进行处理。

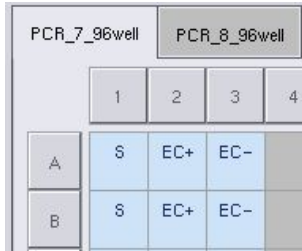
<b>Important 重要</b>	<p>After pressing <b>Queue</b>, the assignment and modification of Assay Parameter Sets is saved and cannot be changed, and it is not possible to return to the <b>Assay Assignment</b> screen.</p> <p>按下“排队”后，系统就会保存检测参数集的分配和修改并禁止进行更改，此时无法返回“检测分配”画面。</p> <p>If you press <b>Cancel</b>, all defined settings will be deleted. Press <b>Yes</b> to confirm.</p> <p>如果按下“取消”，所有定义的设置都会被删除。按下“是”确认。</p>
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### Manually assigning Assay Parameter Sets

#### 手动分配检测参数集

1. Select an Assay Parameter Set to be assigned from the tabs.

从选项卡选择要分配的检测参数集。



If **No** was selected for **Assign each assay individually?** in the **Assay Selection** screen, it is not possible to select individual assays. A single tab, **All Assays** is automatically selected

如果在“检测选择”画面中对“单独分配每个检测？”选择“否”，则无法单独选择检测，并自动选择一个选项卡“全部检测”。

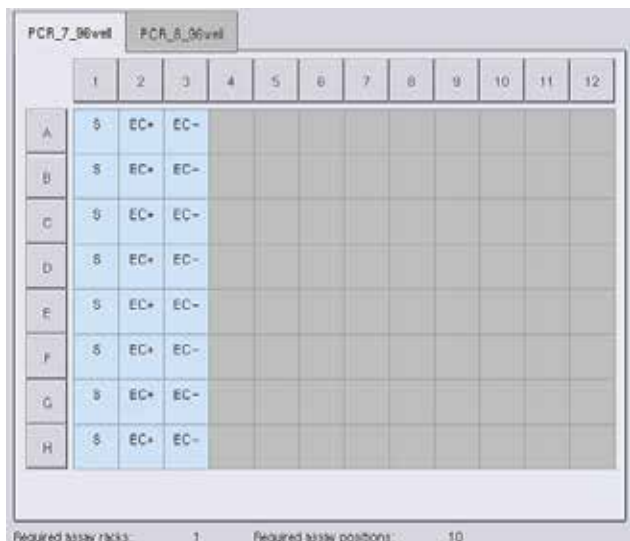


2. Select the sample positions to which the Assay Parameter Set(s) should be assigned, and press **Assign**.

1. 选择样本位置以分配检测参数集并按下“分配”。

The selected Assay Parameter Set(s) will be assigned to the selected positions. A number will appear in the bottom right corner of the assigned sample positions. This number indicates the number of Assay Parameter Sets that have been assigned to a particular sample.

所选检测参数集将会被分配至所选的位置。在分配的样本位置右下角会出现一个数字，表示分配至特定样本的检测参数集的数目。



<p><b>Important</b> 重要</p>	<p>The <b>Queue</b> button becomes active when at least one sample is assigned to every assay and when at least one sample is assigned to each slot.</p> <p>“排队”按钮在将至少一个样本分配至每个检测时以及将至少一个样本分配至每个槽时激活。</p>
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#### 12.4.4 Modifying assay parameters 修改检测参数

The assigned Assay Parameter Set defines the default parameters for a run. To change the assay parameter(s), proceed as follows:  
分配的检测参数集定义了运行的默认参数。如要更改检测参数，可按如下步骤处理：

2. Press **Specifications**.



点击“参数”。

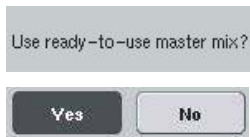
The **Assay Specifications** screen will appear.  
随即出现“检测参数”界面。

3. Select the tab for the Assay Parameter Set. The **Assay Parameter Set** list will be displayed.  
选择检测参数集标签，随即显示“检测参数集”列表。





4. Select the Assay Parameter Set for which the parameter will be changed from the tab list.  
从标签列表中选择想要更改参数的检测对照集。



5. Press **Yes** or **No** to define whether or not a ready-to-use master mix will be used.

点击“是”或“否”，定义是否使用即用型预混液。

> **Sample**

> **Assay controls**

> **Assay standards**

6. Select one of the three headings to view a list of parameters.  
选中其中一个标题（共三个），浏览参数列表。

7. Modify the desired parameters.

修改所需的参数。



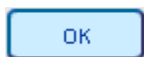
After modifying a parameter, the associated value appears green. A hand symbol is displayed in the active assay tab and next to the modified parameter.



修改过参数后，相关的数值变为绿色。在激活的检测标签内临近修改的参数位置会显示一个手掌符号。

8. Press **OK**.

点击“OK”。



All changes will be saved and the system will return to the **Assay Assignment** screen.

所有更改将会随之保存，同时系统返回“检测分配”界面。

<b>Important</b> <b>重要</b>	For “Read only” Assay Parameter Sets, only the number of replicates can be modified. 对于“只读型”检测参数集，仅可修改重复数目。
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<b>Important</b> <b>重要</b>	For user-defined output patterns, the number of replicates for assay controls and for assay standards cannot be modified. 对于用户自定义输出模式，检测对照和检测标准品的重复数目不可修改。
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<b>Important</b> <b>重要</b>	It is not possible to modify assay parameters in work list mode. 在工作列表模式下，不可修改检测参数。
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<b>Important</b> <b>重要</b>	If the parameters are modified, the changes will not be saved in the Assay Parameter Set. They will be used for the current run only. To change parameters in an Assay Parameter Set for future runs, use the <b>Process Definition</b> editor tool of the QIASymphony Management Console. For further information, refer to the <i>QIASymphony Management Console User Manual</i> . 参数修改后，改动不会保存到检测参数集中。此类参数仅用于目前的运行。如要为以后的运行修改检测参数集，可使用 QIASymphony 管理控制台的“过程定义”编辑器工具。更多信息，请参阅 QIASymphony 管理控制台用户手册。
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#### 12.4.5 Queuing an independent assay run 对独立的检测运行排队

When assay definition is completed the assay run can be queued. Proceed as follows:  
完成检测定义后，检测运行即可排队。请按如下步骤操作。



1. Press **Queue** in the **Assay Assignment** screen.

点击“检测分配”界面中的“排队”。

The QIASymphony SP/AS instruments now validate the assay run and create a loading information file.

QIASymphony SP/AS 仪器现已验证检测运行，并创建了一份加载信息文件。

Once an assay run is queued it is not possible to return to the assay definition process

加载运行排队后，无法返回到检测定义过程。

2. The **Loading Information** screen appears.

随即出现“加载信息”界面。

You can now load the instrument worktable. Refer to Section 12.4.1 for more information

现在，您可加载仪器工作台。更多信息请参阅第 12.4.1 节。

#### 12.4.6 Validating the assay run

##### 验证检测运行

QIASymphony SP/AS instruments validate all defined values for the assay run and determine whether the assay run can be loaded. The validation process includes the following checks: QIASymphony SP/AS 会验证所有检测运行的定义值，并判定相应的检测运行是否可以加载。验证过程包括以下检查内容：

Checks that the number of assay positions required does not exceed the number of positions available on the assay rack(s), according to the defined Assay Parameter Set(s) (internal software check)

根据定义的检测参数集（内参），检查检测位置的数目是否超过检测管架可用的位置数目。

Checks that the total volume of master mix required does not exceed the available volume in the largest master mix bottle (internal software check)

检查所需的预混液总体积是否超过最大的预混液瓶的可用体积（内部软件检查）

For sample positions that need normalization, checks that the dilution parameters are in specified range

对于需要标准化的样本位置，检查稀释参数是否在特定范围内。

If anything is incorrect, an error message will appear informing the user about exactly what is incorrect. The run cannot be loaded until the message is acknowledged and the problem is corrected.

如果任何一项有误，则会出现一条错误消息，提示用户具体哪些内容不正确。在确认该消息并纠正问题之前，无法加载运行。

##### 12.4.6.1 Loading information file

###### 加载信息文件

When **Queue** is pressed while **Auto Transfer** is active, the loading information file will be created and printed. The loading information file contains all information that the user requires for loading

reagents, sample rack(s), assay rack(s), and disposable filter-tips into the QIASymphony AS drawers.

在“自动传输”按钮激活时点击“排队”，将创建并打印加载信息文件。加载信息文件包含用户将试剂、样本管架、检测管架和带滤芯一次性吸头加载到 QIASymphony AS 抽屉中所需的一切信息。

For detailed information about the **Auto Transfer** tool, refer to Section 8 of the *QIASymphony Management Console User Manual*.

有关自动传输工具的详细信息，请参阅 QIASymphony 管理控制台用户手册第 8 节。

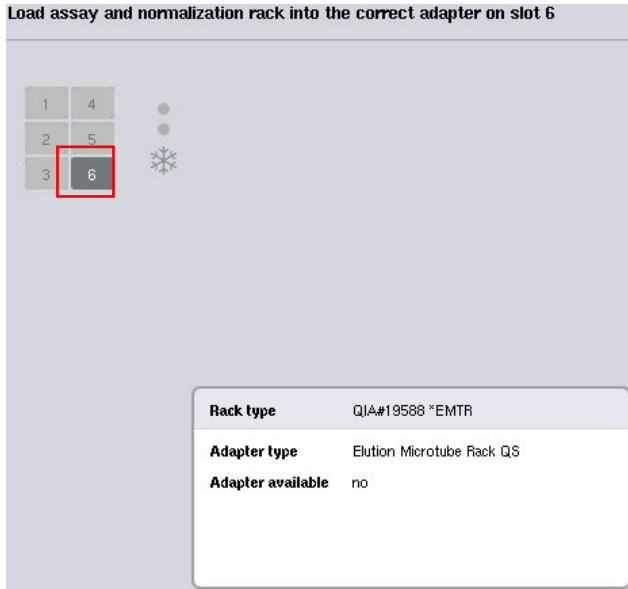
#### 12.4.7 Loading an independent run 加载独立运行

For details about how to load the QIASymphony AS, see Section 12.4.8.  
有关如何加载 QIASymphony AS 的详细信息，请参阅第 12.4.8 节。

If your independent run includes a normalization step, see the following sections.  
如果您的独立运行包含标准化步骤，请参阅后文。

##### 12.4.7.1 Viewing loading information (only for assay run with normalization) 浏览加载信息（仅适用于标准化的检测运行）

Press the **Normalization** slot in the **Loading information** screen to view detailed information about the required normalization rack.  
点击“加载信息”界面内的“标准化”槽，浏览有关所需的标准化管架的详细信息。



Assay Setup/Loading Information screen.

“检测构建/加载信息”界面

#### 12.4.7.2 Loading a normalization rack (only for assay run with normalization)

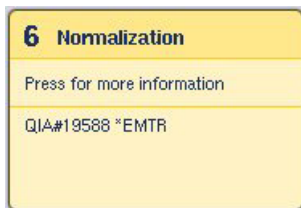
##### 加载标准化管架（仅适用于进行标准化的检测运行）

To load a normalization rack, proceed as follows:

加载标准化管架时，可按如下步骤操作：

1. If not already open, open the “Assays” drawer. Temporary cooling for defined slots is started.  
如果“检测”抽屉未打开，将其打开。定义的槽的暂时冷却功能启动。
2. In the **Assay Setup/Loading information** screen press the **Normalization** slot (highlighted yellow).

进入“检测构建/加载信息”界面，然后点击“标准化”槽（黄色高亮）。



Detailed loading information for the slot is shown.

随即显示槽的详细加载信息。



- Place the empty normalization rack in the appropriate adapter on slot 6  
将空的标准化管架放在槽 6 上的适当的适配器内。



- Press **Load**. The **Assay Setup/Loading information** screen reappears  
点击“加载”。随即再次出现“检测构建/加载信息”界面  
The loaded slot is now highlighted blue.  
加载的槽现在蓝色高亮显示。
- Leave the “Assays” drawer open to load disposable filter-tips (see “Loading disposable filter-tips” on page 181).  
181 页 “ ”

<b>Important</b> <b>重要</b>	Ensure that the appropriate adapter is used with the normalization rack. 确保各个检测管架搭配正确的适配器使用。
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<b>Important</b> <b>重要</b>	Do not load partially filled normalization racks. 请勿加载部分填充的标准化管架。
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#### 12.4.8 Checking cooling temperatures 检查冷却温度

For instructions about how to check cooling temperatures, see Section 12.3.3.  
有关如何检查冷却温度的说明，请参见第 12.3.3 节。

#### 12.4.9 Starting an independent run 启动独立运行。

Wait until the cooling positions have reached their target temperatures (i.e., when they appear green in the assay setup **Overview** screen).  
等待冷却位置达到目标温度（即，在检测构建“概览”界面中，其显示为绿色）。

Press **Run** in the assay setup **Overview** screen.  
点击检测构建“概览”界面中的“运行”。



If an inventory scan was performed after pressing the **Queue** button, provided that the validation showed no error and nothing was changed after that point, the inventory scan will be skipped and the assay run starts immediately. 如果在点击“排队”按钮之后进行库存扫描，且假定验证无错误且此时未做更改，则会跳过库存扫描同时立即启动检测运行。

If an inventory scan was not performed after pressing the **Queue** button, a message will appear asking whether an inventory scan should be performed for each drawer. 如果在点击“排队”按钮之后未进行库存扫描，则会出现一条消息，提示您是否要针对各个抽屉进行一次库存扫描。

See Section 12.4.7 for detailed information about validating the assay run. 有关检测运行的详细验证信息，请参阅第 12.4.7 节。

#### 12.4.10 Removing assays after an independent run 独立运行后移除检测

When an assay run is completed or canceled, the assays must be removed from the “Assays” drawer. The assays will not be automatically removed from the QIASymphony AS. 检测运行完成或取消后，必需从“检测”抽屉中移除检测。检测不会自动从 QIASymphony AS 中移除。

If the status of a run is shown as **QUEUED**, **STOPPED**, or **COMPLETED**, the assay rack(s) and adapter(s) can be removed.

如果运行状态显示为“排队”、“停止”或“完成”，则可以移除检测管架和适配器。

It is possible to remove assays after an independent run in the same manner that they are removed after an AS run; see Section 12.3.5. Alternatively, follow the steps below.

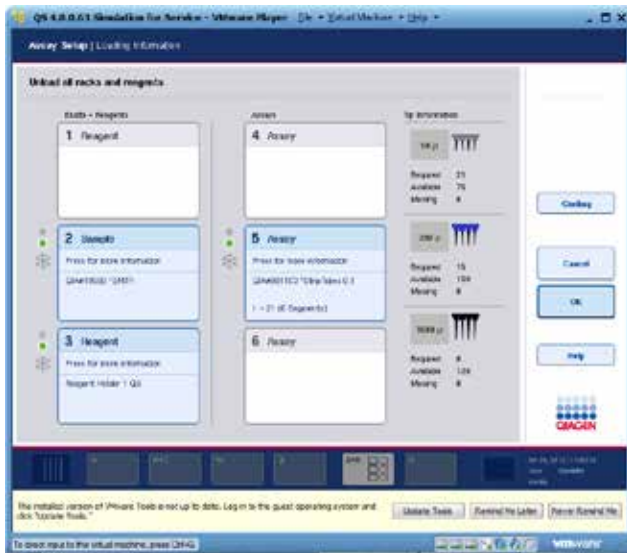
您可以按照与 AS 运行后相同的方式，在独立运行完成后移除检测；详见第 12.3.5 节。此外，也可按照下述步骤操作。

1. Open the “Assays” drawer.

打开“检测”抽屉。

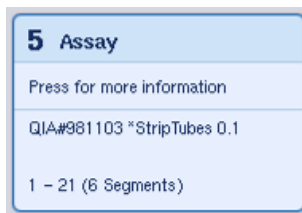
The **Assay Setup/Loading Information** screen appears.

随即出现“检测构建/加载信息界面”



2. Press the first assay rack to be removed.

点击第一个检测管架，将其移除。



The detailed screen for the slot appears.

随即出现该槽的详细界面。

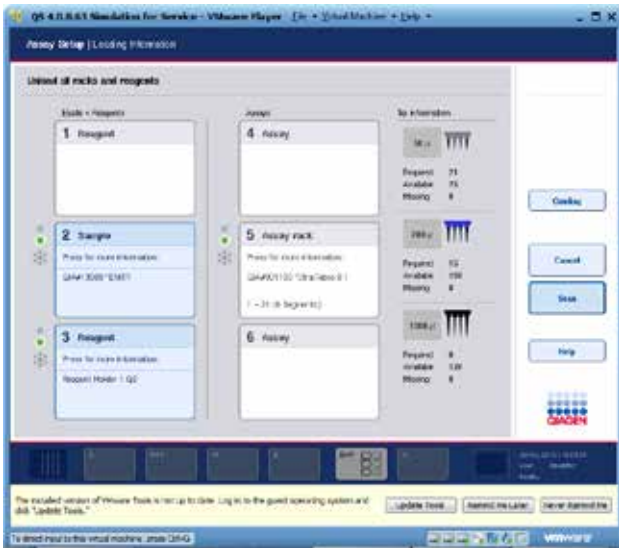




3. Press **Remove** and unload the rack.  
点击“移除”，卸除管架。



The **Assay Setup/Loading Information** screen appears again. The “Assay” slot now appears white and slot cooling is turned off. 随即再次出现“检测构建/加载信息”界面。此时，“检测”槽显示为白色，槽冷却功能关闭。



4. Close the “Assays” drawer.  
关闭“检测”抽屉。

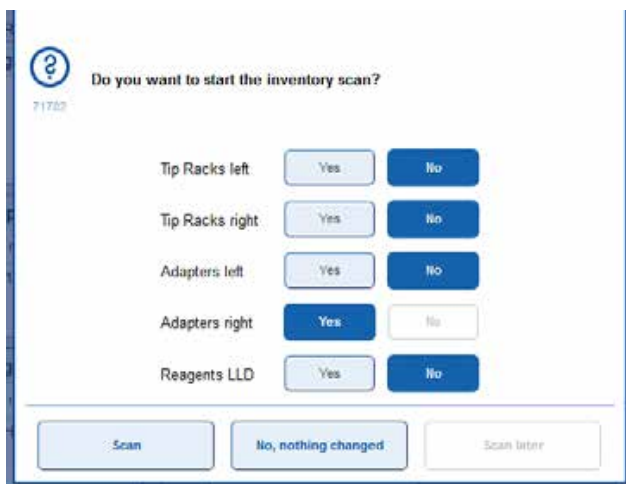
5. Press **Scan**.



点击“扫描”。

A dialog box appears.

随即出现一个对话框。



6. Select **Yes** for **Adapters right** only. Press **Scan**.

在“适配器右移”一栏选择“是”，然后点击“扫描”。

#### 12.4.10.1 Unloading the worktable

##### 卸除工作台

After the inventory scan is performed the **Assay Setup/Loading Information** screen appears again.

Proceed as follows:

执行完库存扫描后，再次出现“检测构建/加载信息”界面。请按如下步骤处理：

1. Open the “Eluate and Reagents” and “Assays” drawers. The **Loading Information** screen appears.

点击“洗脱物和试剂”和“检测”抽屉。随即出现“加载信息”界面。

2. Press a sample rack to be removed.

点击样本管架将其移除。



The detailed screen for that slot appears.

随即出现该槽的详细界面。

3. Unload the selected sample rack from the drawer and then press **Remove** in the touchscreen. If there is a second sample rack, repeat this process for the other rack.



从抽屉中卸除选中的样本管架，然后在触摸屏中点击“移除”。如果还有第二个试剂管架，则针对第二个管架重复这一步骤。

4. Press a reagent rack to be removed.

点击试剂管架，将其移除。



The detailed screen for that slot appears.

随即出现该槽的详细界面。

5. Unload the reagent rack from the drawer and then press **Remove** in the touchscreen. If there is a second reagent rack, repeat this process for the other rack.



从抽屉中卸除试剂管架，然后在触摸屏中点击“移除”。如果还有第二个试剂管架，则针对第二个管架重复这一步骤。

6. If there is a normalization rack, press this slot.

如果有标准化管架，则点击此槽。



The detailed screen for that slot appears.

随即出现该槽的详细界面。

7. Unload the normalization rack from the drawer.

从抽屉中卸除标准化管架。



8. Press **Remove** in the touchscreen.  
 点击触摸屏中的“移除”。

9. Remove empty tip racks.  
 移除空的吸头架。

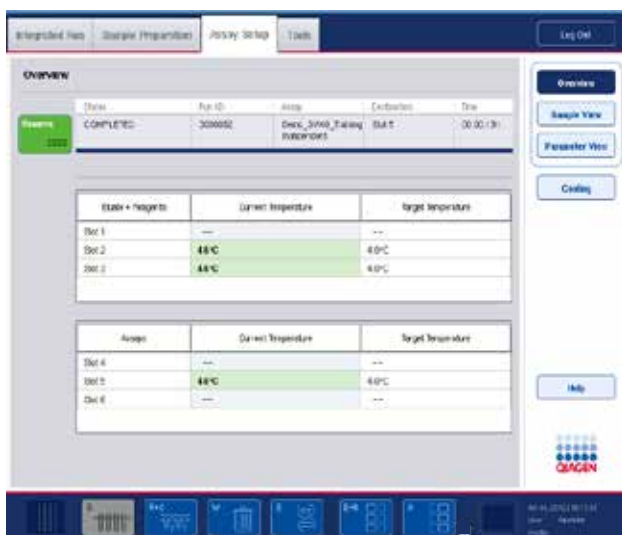
10. Empty the tip disposal bag.  
 清空吸头处理袋。



11. Close the drawers and press **Scan** to perform an inventory scan.

When the inventory scan is complete, the **Assay Setup Overview** screen appears.

关闭抽屉并点击“扫描”，进行一次库存扫描。库存扫描完成后，出现“检测构建概览”界面。



12. Press **Remove** in the assay setup **Overview** screen.  
 点击检测构建“概览”界面中的“移除”。

<b>Important</b> <b>重要</b>	<p>A normalization rack containing unused positions cannot be used for subsequent runs.          含有未使用的位置的标准化管架不可用于连续运行。</p>
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#### 12.4.11 Pausing, resuming, and stopping an independent run 暂停、恢复和停止单独的运行



1. To pause or stop a run when a run is in progress, press **Pause AS** in the **Assay Setup Overview** screen

如要在运行进行过程中暂停或停止运行，可点击“检测构建概览”之中的

“ 暂停 AS ”。

2. After pressing **Pause AS**, the **Continue AS** and **Stop AS** buttons appear. The run can now be resumed or stopped.

点击“ 暂停 AS ”之后，随即出现“ 继续 AS ”和“ 停止 AS ”按钮。

Continue AS

Stop AS

Samples will always be flagged as “unclear” if the run has been paused.

The QIAAsymphony AS will complete the current pipetting step before pausing.

如果运行暂停，则样本会一直标记为“ 不定 ”状态。

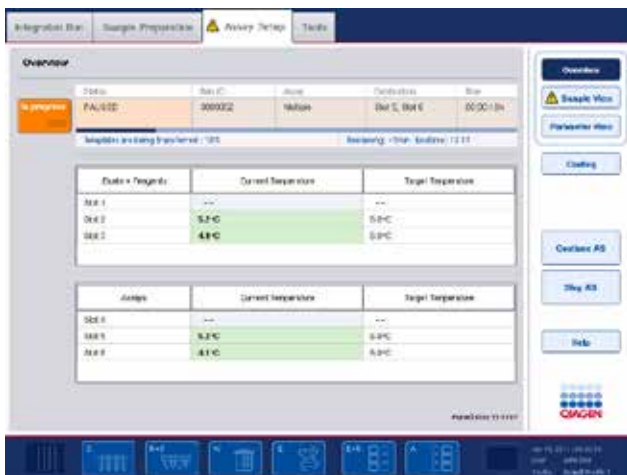
暂停之前，QIAAsymphony AS 会完成当前的移液步骤。

Continue AS

Stop AS

3. To resume a run, press **Continue AS**. To stop a run, press **Stop AS**.

1. 如要恢复运行，可点击“ 继续 AS ”；如要停止运行，可点击“ 停止 AS ”。



**Important**  
**重要**

Pausing a run interrupts the assay setup procedure and may affect assay performance. Only pause a run in an emergency.

暂停运行会中断检测构建操作，会影响检测性能。仅在紧急情况下需要暂停运行。

If a run is canceled, all samples are flagged as “invalid” in the result file. It is not possible to process these samples further on the QIASymphony AS. 如果某一运行取消，则在结果文件中，所有样本均标记为“无效”。此后，无法在 QIASymphony AS 上继续处理这些样本。

If a run is canceled, follow the procedure outlined in Section 12.3.5 to remove assays. It may be possible to continue manually processing the samples, for details refer to Section 2.19, “Protocol recovery”, of the *QIASymphony SP/AS User Manual — Operating the QIASymphony AS*. 如果某一运行取消，则请遵照第 12.3.5 节所述的操作程序移除检测。此过程中可能可以继续手动处理样本，详细信息请参阅“*QIASymphony SP/AS 用户手册 – 操作 QIASymphony AS*”之中的第 2.19 节“程序恢复”。

## 12.5 Performing inventory scans (AS) 进行库存扫描

An inventory scan of each drawer of the QIASymphony AS must be performed before an assay run can be started. This is performed in the same way as for the QIASymphony SP drawers. 在运行一个检测运行之前，必须对 QIASymphony AS 的每个抽屉执行一次库存扫描。以与 QIASymphony SP 抽屉相同的方式进行此操作。

### 12.5.1 Inventory scan of “Eluate and Reagents” drawer “洗脱物和试剂”抽屉库存扫描

The inventory scan of the “Eluate and Reagents” drawer consists of the following steps in the following order:

“洗脱物和试剂”抽屉的库存扫描包括按下列顺序的以下步骤：

1. Bar codes of slots 1–3 or bar codes of adapters on slots 1–3 are scanned.

扫描槽 1-3 的条形码或槽 1-3 上的适配器条形码。

<b>Important</b> <b>重要</b>	For a particular slot, either the bar code of the slot is scanned or, if an adapter is present on the slot, the bar code of the adapter is scanned. 对于特定的槽，可扫描条形码，或如果槽上装有适配器，则扫描适配器的条形码。
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Bar codes of slots 1–3 are scanned to determine whether the slots are empty or occupied.

扫描槽 1-3 的条形码，确定槽是空置还是被装填。

Bar codes of adapters on slots 1–3 are scanned to determine whether a particular adapter type is present on a particular slot.

扫描槽 1-3 上的适配器条形码，确定特定的适配器类型是否装在特定的槽上。

If the expected and current statuses of the slots/adapters do not match, a message will appear to prompt the user to correct the problem.

如果槽/适配器的期望和实际状况不匹配，将会弹出一条消息提示用户纠正问题。

<b>Important 重要</b>	<p>The QIASymphony AS is not able to identify the type of consumables on the adapter. It is therefore important that the correct plates/tubes are loaded on the adapters, as defined in the software.</p> <p>QIASymphony AS 仅检测某个槽是否装有适配器及适配器的类型。QIASymphony AS 不能识别适配器上的耗材类型。因此，按软件定义在适配器上装载正确的孔板/试管相当重要。</p>
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## 2. Tip rack slots are scanned. 扫描吸头架槽。

The disposable filter-tips are scanned to ensure that the correct tip type has been loaded and that there are sufficient filter-tips available for the defined assay run.

扫描一次性带滤芯吸头，确保已装载了正确的吸头类型，并有充足的带滤芯吸头可用于定义的检测运行。

If a tip is detected in the first and last position of the tip rack, the tip rack will be categorized as full. If the first or last tip is missing, a full scan will be performed to determine the number of tips in the tip rack.

扫描检测到的吸头架中的所有吸头架槽，检测吸头数目。如果在吸头架的首个和末个位置检测到了吸头，则吸头架将被认为已装满。如果首个或末个吸头缺失，将进行一次完全扫描，检测吸头架中的吸头数目。

If there are not enough filter-tips of the correct type available, a message will appear on the touchscreen prompting the user to load more tips.

如果没有足够的可用的正确类型的带滤芯吸头，触摸屏上将会弹出一条信息提示用户装载更多的吸头。

<b>Important 重要</b>	<p>If there are insufficient tips available for the defined assay run and it is not possible to load more tips before starting the run, tips can be reloaded during the assay run. This will be documented in the loading information file, and in the result file if user interaction was required.</p> <p>如果可用吸头对于定义的检测运行不充足并且在启动运行前无法装载更多吸头，则在检测运行过程中可重装吸头。如果用户界面要求，此操作将被记录于装载信息文件和结果文件中。</p> <p>Pausing the run to reload tips will result in the samples being flagged as "unclear".</p>
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暂停运行重新加载吸头，会导致样本被标记为“不定”。
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### 12.5.1.1 Partial inventory scan

#### 部分库存扫描

If you need to repeat an inventory scan for the “Eluate and Reagents” drawer (e.g., if a change has been made on the worktable), you can perform a partial inventory scan. You can choose to scan the following worktable items separately:  
如果您需要对“试剂和耗材”抽屉重复进行一次库存扫描（如，若工作台发生了变更），则您可以选择部分库存扫描。您可单独选择扫描以下工作台物品：

Tip Racks left

Tip Racks right

Adapters left

Adapters right

Reagents LLD

左侧吸头架

右侧吸头架

左侧适配器

右侧适配器

试剂液位检测

### 12.5.2 Inventory scan of the “Assays” drawer

The inventory scan of the “Assays” drawer is performed on slots 4–6 as for slots 1–3 of the “Eluate and Reagents” drawer.  
“检测”抽屉槽 4-6 的库存扫描与“洗脱物和试剂”抽屉的槽 1-3 的库存扫描操作方法相同。

If an inventory scan of the “Assays” drawer needs to be repeated, it is also possible to perform a partial inventory scan where tip racks and adapters can be scanned separately.  
如果“检测”抽屉的库存扫描需要重复进行，还可执行一次部分扫描，其中可单独对吸头架和适配器进行扫描。

After the inventory scan has been performed, the inventory of the QIASymphony SP/AS instruments is updated. The system switches off temporary cooling for the slots and switches on cooling for loaded slots.



库存扫描完成后，QIASymphony SP/AS 的库存即完成更新。系统针对关闭槽的暂时冷却功能，打开加载的槽的冷却功能。

<b>Important</b> <b>重要</b>	The inventory scan must be performed before a run can be started.
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### 12.5.3 Transfer to a PCR cyclers

#### 传输到 PCR 仪

After assay setup, assays are removed from the QIASymphony AS and can be manually transferred to a PCR cyclers for detection. A choice of output formats enables use of different PCR cyclers (e.g., Rotor-Gene Q, 96-well cyclers, 32-capillary cyclers) for detection. Cyclers files can be exported from QIASymphony SP/AS instruments to selected PCR cyclers. 检测构建完成后，从 QIASymphony AS 上移除检测并手动传输到 PCR 仪上进行检测。由于有多种输出格式可选，因而在检测应用时，可选择不同的 PCR 扩增仪（例如，Rotor-Gene Q、96 孔 PCR 仪、32 毛细管 PCR 仪）。PCR 仪文件可从 QIASymphony SP/AS 仪器传输到选定的 PCR 仪。

## 13 Troubleshooting

### 故障排除

#### 13.1 Error messages and warnings

##### 错误信息和警告

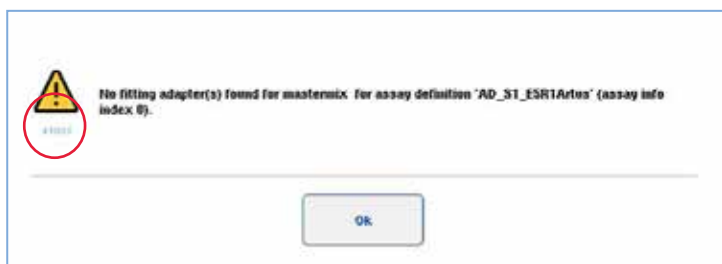
If a problem occurs during operation of the QIASymphony SP and/or AS, an error message or warning will appear on the touchscreen.

如果在 QIASymphonySP 和/或 AS 运行过程中发生问题，触摸屏上将会弹出错误消息或警告。

See Section 3.2.3 of the *QIASymphony SP/AS User Manual — Operating the QIASymphony SP* for more information about the different symbols that may occur in error messages.

有关表示错误信息的不同符号的更多细节请参阅 QIASymphony SP 用户手册 - 操作 QIASymphony SP 第 3.2.3 节。

If the error has an error code it is displayed on the left side of the message, below the error symbol (see below). The error message is displayed in the middle of the dialog box  
如果错误信息显示错误代码，其会显示在消息的左侧错误符号的下方（参见下文）。在对话框的中间显示错误消息。



##### 13.1.1 Errors indicated in the status bar

###### 状态栏中提示的错误

In some cases, errors are indicated by the drawer buttons flashing yellow in the status bar. Press the flashing button to view the error message and follow instructions.  
在某些情况下，通过状态栏中的“S”、“R+C”、“W”、“E”、“E+R”和“A”按钮黄闪来提示错误。点击黄闪按钮查看错误信息并遵照说明。



### 13.1.2 Errors indicated in the tab headers

#### 标签标题中提示的错误

The different tab headers support an error indicator within the tab. Thus, in some cases, errors are indicated by a warning sign icon next to the tab header name.

不同的标签标题的标签内都有一个错误指示符。因此，在部分情形下，会通过标签标题名称旁边的警示服务图标提示错误。

### 13.1.3 Errors indicated in the command bar

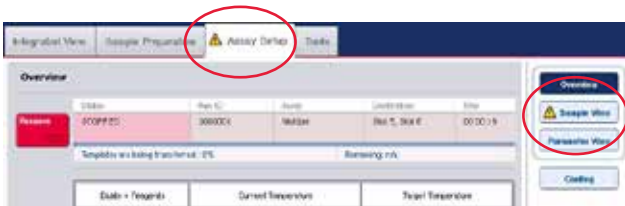
#### 命令栏提示的错误

In case of an error, a warning sign icon will be displayed within the menu button affected, next to the name.

如果出现错误，会在相关的菜单按钮内，临近标签名称的位置显示错误符号图标。

Switch to the affected tab or press the command bar button concerned for an overview of the error situation within the dialog.

切换至相关标签，或点击相关的命令栏按钮，可以浏览对话框内的错误情形。



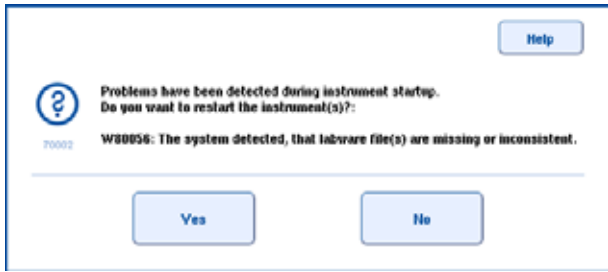
Error indication in tab headers and command bar buttons.

### 13.1.4 Messages with **Help** button

#### 带“帮助”按钮的信息

If a message appears with a **Help** button, the user has access to instructions about how to solve the problem.

如果消息出现“帮助”按钮，用户可查看解决问题的说明。



Proceed as follows:

按如下操作：

1. Press the **Help** button. A new message will appear.

点击“帮助”按钮。将会出现新消息。



2. Carefully read the instructions and then press **OK**.

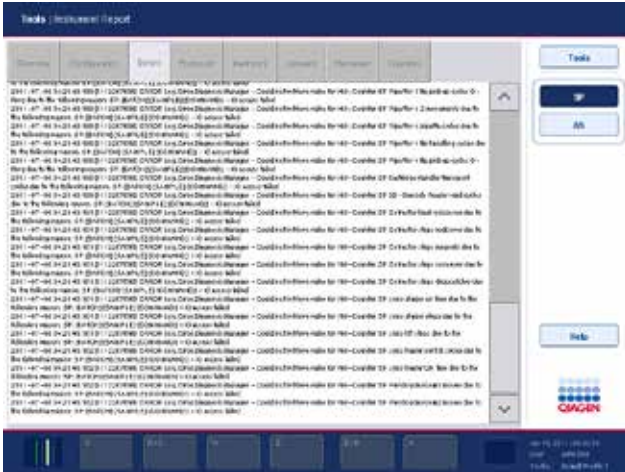
仔细阅读说明然后点击“OK”。

3. Close the message and follow the instructions.

当关闭消息时，请遵循说明。

**Note:** To read the message again, select **Instrument Report** in the **Tools** screen. Then select the **Errors** tab. Recent error messages will be listed there.

**注意：**如果您想要再次阅读消息，请选择“工具”中的“仪器报告”。然后选择“错误”标签。在此列有最近的错误消息。



### 13.1.5 Messages without **Help** button

#### 不带“帮助”按钮的信息

If a message appears that does not have a **Help** button, perform one of the following:

如果显示消息不带“帮助”按钮，请执行下列其中一种操作：

Confirm the message and then follow the instructions that were outlined in the message.

确认消息，然后遵照消息指出的说明。

If the message has an error code, follow the instructions for that particular error code listed in Section 13.4.

如果消息有错误代码，请遵照章节 10.3 中所列特定错误代码的说明。

**Note:** If a message appears that has an error code that is not listed, contact QIAGEN Technical Services.

**注意：**如果显示消息有错误代码但是并未列出，请联系 QIAGEN 技术服务部门。

If the message does not have an error code, refer to Section 13.5 for context-specific errors and associated instructions.

如果消息没有错误代码，请参考第 13.5 节了解上下文特定错误及相关说明。

Call QIAGEN Technical Services if recommended or required.

如需要，请电话联系 QIAGEN 技术服务部。

## 13.2 Software help boxes 软件帮助对话框

In order to assist and guide the user, the QIASymphony SP/AS provides a software help for all screens.

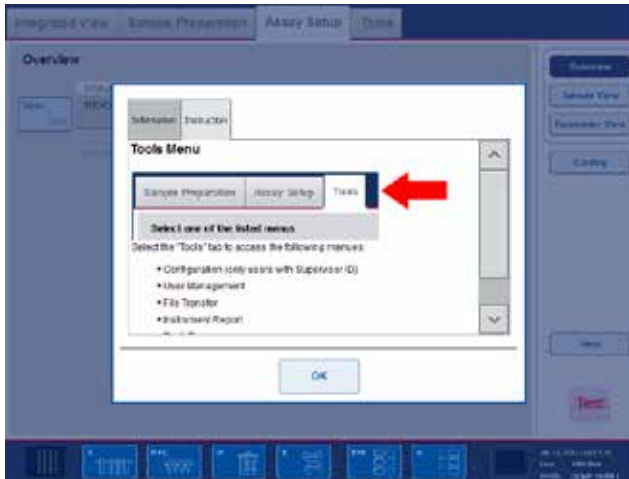
为了协助和指导用户，QIASymphony SP/AS 为所有界面提供软件帮助。

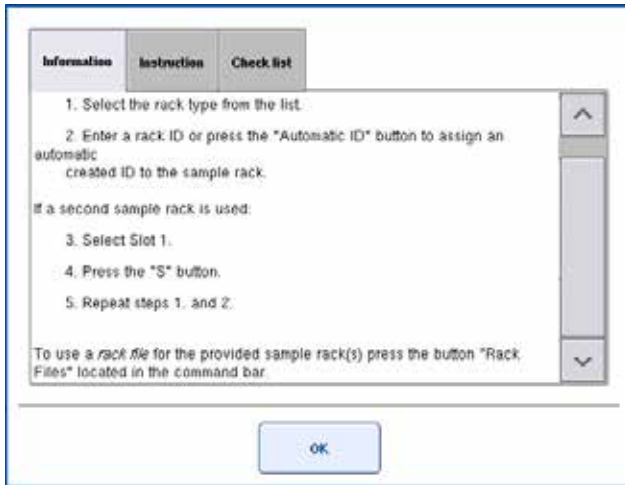
To access the software help texts, press the **Help** button in the command bar, which appears in all screens.

如需访问软件帮助文本，请点击命令栏内的“帮助”按钮（所有的界面都含有）。

Pressing this **Help** button will open a dialog in front of the actual screen. The displayed text within the help message gives advice on how to handle the current screen.

点击“帮助”按钮，会在当前的界面前方打开一个对话框。帮助消息内显示的文字会就如何解决目前的问题给出建议。





To return to the original screen, press **OK** inside the help dialog.

如要返回原始界面，可点击帮助对话框内的“**OK**”。

### 13.2.1 Structure of software help boxes 软件帮助对话框结构

A help box consists of a maximum of 3 different tabs (in the following sequence): **Information**, **Instruction**, and **Checklist**.

帮助对话框包括最多 3 个不同的标签（排列顺序如下）：信息、说明和核查表。

Information 信息	The <b>Information</b> tab displays notes about the screen's behavior and/or information about the screen's view. The help text describes options for the user in context.  “ <b>信息</b> ”标签显示有有关界面的行为和/或界面显示内容的信息。帮助文本描述了相应情境下的用户选择。
Instructions 说明	The <b>Instructions</b> tab shows a detailed description of the steps the user will need to execute.  “ <b>说明</b> ”标签显示有由用户需要进行的各个步骤的详细描述。
Checklist 核对表	The <b>Checklist</b> tab includes a selection of different topics the user may check for the actual context. The particular checks described within the checklist do not need to be rigorously executed.  “ <b>核对表</b> ”标签包含用户在具体情境下需要核对的不同主题选项。核对表中描述

的某些选项不必严格执行、
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**Note:** A software **Help** dialog may consist of fewer than the 3 types of text.

**注意：**软件“帮助”对话框可能包含不到 3 种类型的文本。

### 13.3 Contacting QIAGEN Technical Services 在联系 QIAGEN 技术服务部之前要做的事

If an error persists and you need to contact QIAGEN Technical Services, make a record of the incident and create an instrument report file.

如果某个错误持续存在且需要联系 QIAGEN 技术服务部，请记录事件并创建一份仪器报告文件。

#### 13.3.1 Make a record of the incident 事件记录

1. Note down all steps that were performed before and after the error occurred.  
记下在错误发生前后执行的所有步骤。

2. Document any messages that appeared on the touchscreen.  
记录触摸屏上出现的任何消息。

**Note:** It is important that you can tell us the error code and the associated text. This information will help the QIAGEN Field Service Specialist and Technical Services to resolve the error.

**注意：**告知我们错误代码及相关文本非常重要。此信息将有助于 QIAGEN 技术服务专员及技术服务部解决错误。

**Note:** In some cases the software does not list the error message on the touchscreen. The error is documented in the system log file either for the QIAsymphony AS or QIAsymphony SP.

**注意：**在某些情况下，软件不会再触摸屏上列出错误消息。错误信息会记录在 QIAsymphony AS 或 QIAsymphony SP 系统日志文件中。

3. Note the date and time at which the error occurred.  
记录错误发生的日期和时间。

4. Provide a detailed description of the incident. For example, provide a photograph of the worktable and record the following information:

提供对事件的详细描述。例如，提供工作台的照片并记录以下信息：

Where on the QIAsymphony SP/AS instruments did the error occur?

In which step of the protocol did the error occur?



What was observed (e.g., has something broken, are tips or sample prep cartridges in unusual places on the worktable?) and what was expected?

Was there any unexpected noise?

在 QIA Symphony SP/AS 仪器的哪个部件发生错误？

在程序的哪个步骤发生错误？

观察到了什么（如，有某些东西损坏，吸头或样本制备卡夹在工作台上的位置异常）及预期会发生什么？

是否有任何意外噪音？

In addition, if relevant, provide the following information.

此外，如果相关，请提供以下信息。

If tips were lost during pipetting, provide the lot number and tip type.

如果在移液过程中吸头丢失，请提供吸头批号和吸头类型。

Were tip racks manually refilled?

Which reagent adapter, including manufacturer and ordering number, was used?

Which sample and eluate racks, including manufacturer and ordering number, were used?

Which assay rack, including manufacturer and ordering number, was used?

吸头架是否手动重装？

使用的是哪一种试剂适配器，包括制造商和订购号？

使用的是哪一种样本和洗脱管架，包括制造商和订购号？

使用的是哪一种检测管架，包括制造商和订购号？

### 13.3.2 Creating an instrument report file

#### 创建仪器报告文件

If you are requested by QIAGEN Technical Services to create an instrument report file, proceed as follows:

如果 QIAGEN 技术服务部要求创建一个仪器报告文件，请遵照如下操作：

1. Log in to the instrument(s).  
登录仪器。
2. Select **Instrument Report** in the **Tools** menu. The **Overview** tab of the **Instrument Report** menu appears and instrument data will be retrieved.  
进入“**工具**”菜单，选择“**仪器报告**”。“**仪器报告**”菜单的“**概览**”标签出现并恢复仪器数据。



3. To create an instrument report for the QIAsymphony SP, select **SP**. To create an instrument report for the QIAsymphony AS, select **AS**.  
如果您想对 QIAsymphony SP 创建一份仪器报告，请选择“SP”。要对 QIAsymphony AS 创建一份仪器报告，请选择“AS”。
4. Enter the number of days for which you want the instrument report file to cover.  
输入您希望仪器报告包含多少天的记录。
5. Press **Create**, or to save the file directly to the USB stick, insert the USB stick and then press **Create + Save to USB**.  
点击“**创建**”，或直接保存文件至 USB 盘，插入 USB 盘，然后点击“**创建并保存至 USB**”。

To download all instrument report files to the USB stick, see Section 8.3.2 of the *QIAsymphony SP/AS User Manual — General Description*. Instrument report files can also be downloaded using the QIAsymphony Management Console. See Section 4 of the *QIAsymphony Management Console User Manual* for more information.  
要下载所以仪器报告文件至 USB 盘，请参阅“QIAsymphony SP/AS 用户手册 – 概述”第 8.3.2 节。也可通过 QIAsymphony 管理控制台下载仪器报告文件。请参阅 QIAsymphony 管理控制台用户手册第 4 节获取更多信息。

## 13.4 Error codes

### 错误代码

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
23	XYC/PCM: invalid position. XYC/PCM:无效位置	<p>One or more positions are inaccessible. If the problem occurs during eluate transfer, ensure that only a 24-well elution rack is used on "Elution slot 4".</p> <p>If the error is related to another position on the instrument worktable, contact QIAGEN Technical Services.</p> <p>一个或多个位置无法达到。如果错误发生在洗脱物转移过程中, 请确保“洗脱槽 4”使用的是 24 孔洗脱架。</p> <p>如果错误与仪器工作台上的另一位置相关, 请联系 QIAGEN 技术服务部。</p>
2070	Pipetting channel module: no liquid level found. 移液通道模块: 未发现液位	<p>Source container could be empty or an error occurred during liquid-level detection. Samples are flagged as "invalid".</p> <p>原容器可能为空, 或在液位检测过程中发生了错误。样本标记为“无效”。</p>
2081	Clot detected. 检测到凝块	<p>A clot has formed in a sample and cannot be transferred by the QIASymphony SP. Remove the clot(s) and process the sample in a new batch.</p> <p>样本中已形成无法被 QIASymphony SP 转移的凝块。清除凝块, 并在一个新批中处理样本。</p>
31656	The inventory scan detected an unexpected eluate rack on slot X that is not registered in the system. 库存扫描检测到未在系统中注册的洗脱架	<p>The inventory scan of the "Eluate" drawer detected an elution rack on the displayed elution slot. Open the "Eluate" drawer, define the elution rack type by selecting the elution slot, and then assign an elution rack type from the list. Alternatively, remove the elution rack from the "Eluate" drawer. Close the "Eluate" drawer and run another inventory scan.</p> <p>“洗脱物”抽屉库存扫描检测到显示的洗脱槽上的洗脱管架。打开“洗脱物”抽屉, 选择洗脱槽定义洗脱架类型, 然后分配列表中的洗脱架类型。或者从“洗脱物”抽屉上移除洗脱架。关闭“洗脱物”抽屉, 然后再进行一次库存扫描。</p>
31657	The Inventory Scan detected a missing eluate rack on slot X (expected rack type: Y). 库存扫描检测到槽 X 上洗脱架存在缺失 (期望的架类型: Y)	<p>A rack has been removed from slot X, but this rack was not removed in the software.</p> <p>Either replace the missing rack on the slot, or remove the rack in the software.</p> <p>已从槽 X 卸除管架, 但此管架在软件中未被卸除。</p> <p>重新在槽上装上缺失的管架, 或者通过软件移除管架。</p>
31658	The Inventory Scan cannot detect an adapter bar code on eluate rack on slot X (expected rack type: Y). 库存扫描检测到槽 X 上洗脱架的错误适配器类型 (期望的架类型: Y)	<p>A rack has been detected on slot X that does not match the rack that is defined for the run in the software.</p> <p>Either remove the rack from the slot, or adjust the rack definition in the software.</p> <p>已用另一个架替换了槽 X 上的架, 但不匹配软件中运行定义的架。</p> <p>从槽上移除管架, 或者通过软件调整管架定义。</p>
31659	The Inventory Scan detected a wrong adapter type on eluate rack on slot X (expected rack type: Y). 库存扫描检测到槽 X 上洗脱架的错误适配器类型 (期望的架类型: Y)	<p>A rack on slot X has been replaced with another rack that does not match the rack that is defined for the run in the software.</p> <p>Either replace the original rack on the slot or remove the original rack and redefine the new rack in the software.</p> <p>已用另一个架替换了槽 X 上的架, 但不匹配软件中运行定义的架。</p> <p>在槽上装上原来的管架, 或者移除原来的管架并通过软件重新定义新的管架。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
31680	The eluate labware X is not recommended for use with the ACS Y. 洗脱器具 X 不建议用于 ACS Y。	See Error Code 70505. 参见错误代码 70505。
32010	Can't change batch, batch is in state ON_HOLD. 无法更改批，批处于 ON_HOLD 状态。	Remove all samples from the QIAAsymphony SP and insert them again. Redefine sample batch(es). 从 QIAAsymphony SP 移除所有样本，并重新插入。重定义样本批。
32015	The eluate cooling for slot X is not supported. 不支持槽 X 的洗脱物冷却功能。	If the protocol requires cooling of the elution rack, use slot 1 and activate cooling. 如果程序要求冷却洗脱架，使用槽 1 并激活冷却。
33021	Unexpected cartridge found on slot "Extractor-2". “提取器 2”槽上发现非所需的卡夹。	Rod covers have been detected on the magnetic head. The run cannot be started. Check and then clean up the worktable. 已检测到洗脱架上存在磁棒套。运行无法启动。 请检查并清理工作台。
45001	No fitting adapter(s) found for master mix X for assay definition "Y" (assay info index Z). 对于检测定义“Y”，未找到预混液 X 的匹配适配器（检测信息索引 Z）。	The reagent holders do not have the capacity to hold the calculated volumes of reagent. To reduce the number of tube positions required on the reagent holders, reduce the number of assays or reduce the number of samples. Alternatively you could reduce the number of replicates for samples, assay controls, assay standards, and no template controls. 试剂基座无法容纳计算出的试剂体积。 要减少试剂基座上需要的试管位数，应减少检测数目或减少样本数目。或者，您还可以减少样本、检测对照、检测标准品和无孔板对照的重复孔数目。
45008	Selected assay(s) and a number of assay points cannot be used as there are no adapters available that can hold the required amount of reagent and/or number of assay control tubes. 选中检测物和多个检测点无法使用，原因是无适配器可容纳要求的试剂量和/或检测对照试管数目。	Ensure that all available adapters are listed in the <b>Adapters AS</b> list. Configure the correct number of available adapters in the <b>Configuration</b> menu, see Section 6.1.3 of the <i>QIAAsymphony SP/AS User Manual — General Description</i> for more information. To reduce the number of tube positions required on the reagent holders, reduce the number of assays or reduce the number of samples. Alternatively you could reduce the number of replicates for samples, assay controls, assay standards, and no template controls. 确保“适配器 AS”列表中列出了所有可用的适配器。在“配置”菜单配置可用适配器的正确数目，请参阅“QIAAsymphony SP/AS 用户手册 - 概述”第 6.1.3 节了解有关操作方法的更多信息。 要减少试剂基座上需要的试管位数，应减少检测数目或减少样本数目。或者，您还可以减少样本、检测对照、检测标准品和无孔板对照的重复孔数目。
45101	There is not enough space on all assay racks to handle the defined samples, assay controls, and assay standards. 检测架上无足够空间处理定义样本、检测对照和检测标准品。	Reduce the number of selected samples, assay standards, assay controls, and no template controls. You could also reduce the number of replicates for samples, assay controls, assay standards, and no template controls. 减少选中样本、检测标准品、检测对照和无孔板对照的数目。 您还可以减少样本、检测对照、检测标准品和无孔板对照的重复孔数目。

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
45103	<p>There are not enough adapters (X) available for labware type Y. Check the adapter configuration of your QIASymphony AS.</p> <p>器具类型 Y 无足够适配器 (X) 可用, 请检查您的 QIASymphony A 的适配器配置。</p>	<p>Ensure that all available adapters are listed in the <b>Adapters AS</b> list. Configure the correct number of available adapters in the <b>Configuration</b> menu, see Section 6.1.3 of the <i>QIASymphony SP/AS User Manual — General Description</i> for more details about how to do this.</p> <p>If there are no more adapters of that type available, reduce the number of replicates for samples, assay standards, and assay controls.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>确保“适配器 AS”列表中列出了所有可用的适配器。在配置菜单配置可用适配器的正确数目, 请参阅《QIASymphony SP/AS 用户手册—概述》第 6.1.3 节了解有关操作方法的更多信息。</p> <p>如果无更多可用的该类型适配器, 则应减少样本重复孔、检测标准品和检测对照的数目。</p> <p>如果问题持续存在, 请联系 QIAGEN 技术服务部。</p>
70110	<p>A disk space overrun was recognized. The current usage is X. Do you want to delete result files older than Y days?</p> <p>识别出盘空间覆盖。当前使用为 X。您是否愿意删除早于 Y 天的旧结果文件?</p>	<p>The system detected that there is less than 15% free disk space. Result files older than 10 days (default) can be deleted from the instrument(s). Press <b>Yes</b> to free up file space and delete older result files.</p> <p><b>Note:</b> If you choose to delete results files, they cannot be recovered. Be sure to download result files older than 2 days to the USB stick before you decide to free up disk space.</p> <p>系统检测到空磁盘空间不足 15%。</p> <p>可从仪器删除早于 10 天 (默认) 的旧结果文件。点击“是”释放文件空间并删除旧结果文件。</p> <p><b>注意:</b> 如果您选择删除结果文件, 它们可能无法重新恢复。在您决定清理磁盘空间 2 天前, 将旧结果文件下载到 USB 盘。</p>
70118	<p>Bar code reading error on slot X. Try insertion again and reduce insertion speed!</p> <p>槽 X 上的条形码阅读错误。请检查条形码并放慢插入速度重新插入!</p>	<p>A bar code reading error occurred. A sample tube may be incorrectly positioned, a bar code may be dirty, or a bar code may not be clearly printed.</p> <p>Either, correct the position of the sample tube, clean the bar codes, check the bar code printout, or reduce the speed at which the sample tubes are loaded.</p> <p>发生条形码阅读错误。样本试管可能放置不正确, 条形码可能脏, 或条形码未清晰打印。</p> <p>或者, 纠正条形码的位置, 清洁条形码, 检查条形码打印件, 或降低加载样本试管的速度。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
70401	<p>Some of the combinations of ACS and sample labware that you selected are marked as "not recommended" [List of not recommended combinations].</p> <p>Press <b>No</b> to stay in this dialog and assign different ACS or go to the previous dialog to change the sample labware. Do you want to continue anyway?</p> <p>某些您选择的 ACS 和样本器具组合标记为“未被推荐”[未被推荐的组合列表]。</p> <p>点击“否”停留在此对话框并分配不同的 ACS，或回到先前的对话框更改样本器具。无论如何您都想继续吗？</p>	<p>The selected sample tubes/rack are not recommended for use with the Assay Control Set.</p> <p>Perform one of the following: Press <b>Yes</b> to ignore the message. Press <b>No</b> and change the sample tube/rack.</p> <p>Use the <b>Labware Browser</b> menu or the labware lists to identify which labware is recommended for use with which protocols. Labware lists are available for download at <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>.</p> <p>The "Supervisor" can go to the <b>Configuration</b> menu and disable the parameter <b>Check combination of protocol and recommended labware during run definition?</b> in the <b>Process SP 2</b> tab.</p> <p>选中样本试管/架不推荐与检测对照集一起使用。</p> <p>执行以下其中一种操作：</p> <p style="padding-left: 40px;">点击“是”，忽略此消息。</p> <p style="padding-left: 40px;">点击“否”并更改样本试管/管架。</p> <p>通过“器具浏览器”菜单或器具列表确定该程序推荐使用的器具。器具列表可在 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a> 下载。</p> <p>“Supervisor”可进入“配置”菜单，禁用“SP2 流程”标签内的参数“在运行定义时检测程序操作步骤和推荐器具的组合的正确与否”。</p>
70402	<p>Sample X: Labware Y is not recommended for use with ACS Z. 样本 X：器具 Y 不推荐与 ACS Z 一起使用。</p>	<p>The sample tube/rack is not recommended for use with the Assay Control Set.</p> <p>See error code 70401.</p> <p>样本试管/架不推荐与检测对照集一起使用。</p> <p>请查看错误代码 70401。</p>
70504	<p>It was not possible to define all batches automatically. You must define them separately.</p> <p>无法自动定义所有的批。您必须分别定义它们。</p>	<p>Not all sample batches could be defined using the <b>Fast Setup</b> button. Define each batch separately. If sample errors occurred, these will be displayed during definition of the relevant batch.</p> <p>并非所有批均可通过“快速设置”按钮定义。分别定义每一个批。如果发生样本错误，在相应批的定义过程中将显示这些。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
70505	<p>Some of the selected combinations of ACS and elution rack types that you selected are marked as "not recommended" [List of not recommended combinations].</p> <p>Press <b>No</b> to stay in this dialog and change the elution rack or continue without any changes by pressing <b>Yes</b>.</p> <p>某些您选择的 ACS 和样本器具组合标记为“未被推荐”[未被推荐的组合列表]。</p> <p>点击“否”停留在此对话框并更改洗脱管架，或者点击“是”不作更改继续下一步。</p>	<p>Perform one of the following:</p> <p>Press <b>Yes</b> to ignore the message.</p> <p>Press <b>No</b> and change the elution rack.</p> <p>Use the <b>Labware Browser</b> menu or the labware lists to identify which labware is recommended for use with which protocols. Labware lists are available for download at <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>.</p> <p>The "Supervisor" can go to the <b>Configuration</b> menu and disable the parameter <b>Check combination of protocol and recommended labware during run definition?</b> in the <b>Process SP 2</b> tab.</p> <p>执行以下其中一种操作：</p> <p>点击“是”，忽略此消息。</p> <p>点击“否”并更改样本试管/管架。</p> <p>通过“<b>器具浏览器</b>”菜单或器具列表确定该程序推荐使用的器具。器具列表可在 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a> 下载。</p> <p>“Supervisor”可进入“<b>配置</b>”菜单，禁用“<b>SP2 流程</b>”标签内的参数“<b>在运行定义时检测程序操作步骤和推荐器具的组合结合的正确与否</b>”。</p>
71840	<p>Leaving the dialog without successful inventory scan will lead to unexpected results. Do you really want to skip the scan and cancel the dialog?</p> <p>离开此对话框并且未成功进行库存扫描将导致无法预料的结果。您是否真的想跳过扫描并取消对话？</p>	<p>If you do not perform an inventory scan of the "Eluate" drawer, eluates may be transferred to a slot that does not contain an elution rack. Run an inventory scan of the "Eluate" drawer to make sure that the selected elution slots contain elution racks.</p> <p><b>Note:</b> If the inventory scan of the "Eluate" drawer persistently fails, contact QIAGEN Technical Services.</p> <p>如果您未对“洗脱物”抽屉执行一次库存扫描，洗脱物可能会被移至一个不包含洗脱架的槽中。对“洗脱物”抽屉执行一次库存扫描，以确保选中洗脱槽包含洗脱架。</p> <p><b>注意：</b>如果“洗脱物”抽屉的库存扫描持续失败，请联系 QIAGEN 技术服务部。</p>
72002	<p>A rack file is already assigned to a sample slot. 架文件已被分配到样本槽</p>	<p>It is not possible to change the information for this slot as a rack file is assigned. To modify information for this slot, restart the assay definition process without a rack file.</p> <p>无法更改此槽的信息，因为架文件已分配。如果你想更改此槽的信息，重新开始没有架文件的检测定义程序。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
72202	<p>Errors have been identified in the work lists shown below. Please ensure that work lists contain a unique elution rack ID per batch and an elution rack ID for all samples.</p> <p>Work lists with inconsistencies or errors: Worklist_X (missing required elution rack ID for samples: "Y"; multiple elution rack IDs: "Z").</p> <p>确定了显示的工作列表中的错误。请确认工作列表中的每一批次都具有一个唯一的洗脱架 ID，且所有样本都有一个洗脱架 ID。</p> <p>工作列表不一致或出现错误： Worklist_X（缺失所需的样本洗脱架 ID：“Y”；存在多个洗脱管架 ID：“Z”。）</p>	<p>A work list file defines 2 different required elution rack IDs for the samples of the batch currently being defined. This work list therefore cannot be used.</p> <p>Either change the required elution rack ID in the work list or define the batch in that way that the samples to be processed uses just one elution rack ID.</p> <p>工作列表文件为目前进行的样本批次定义了 2 种不同的必需洗脱管架 ID。因此，该工作列表无法使用。</p> <p>请更改工作列表中的洗脱管架 ID 或定义样本批次，以确保待处理的样本只使用一个洗脱管架 ID。</p>
72204	<p>The following samples in work list X are not present: Y. Please place the missing samples on the sample input or correct the work list.</p> <p>工作列表 X 中不存在下列样本：Y。请在样本输入处填写缺失样本或修改工作列表。</p>	<p>A sample was listed in a work list file, but this sample is not part of the batch being defined. The work list file can therefore not be used.</p> <p>Perform one of the following:</p> <p>Add the missing sample(s) to the batch.</p> <p>Delete the missing sample(s) from the work list.</p> <p>Set the configuration parameter <b>Allow partial use of work lists</b> or <b>Allow processing of samples without a work list entry</b> to <b>Yes</b> in the <b>Process SP 3</b> tab of the <b>Configuration</b> menu. This can only be performed by the "Supervisor".</p> <p>在一个工作列表文件中列出一个样本，但是此样本不是正在定义批的部分。因此无法使用此工作列表文件。</p> <p>执行下列其中的一项操作：</p> <ul style="list-style-type: none"> <li>在批中增添缺失的样本。</li> <li>从工作列表中删除缺失的样本。</li> </ul> <p>在“配置”菜单的“SP3 流程”标签中设定配置参数将“<b>允许工作列表的部分使用</b>”或“<b>允许在没有工作列表条目时同样允许样本处理</b>”为“是”。仅可由“Supervisor”执行此项操作。</p>



Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
72208	<p>The following samples cannot be processed because they are not listed in any work list: X. Please remove these samples from the sample input or correct the work list.</p> <p>无法处理下列样本，因为它们未列于任何工作列表中：X。请在样本输入处删除这些样本或修改工作列表。</p>	<p>A sample that is part of the batch currently being defined is not listed in a work list file. The batch can therefore not be defined.</p> <p>Perform one of the following:</p> <ul style="list-style-type: none"> <li>Remove the sample from the batch.</li> <li>Add the sample to a work list.</li> </ul> <p>Set the configuration parameter <b>Allow processing of samples without a work list entry?</b> to <b>Yes</b> in the <b>Configuration</b> menu. This can only be performed by the "Supervisor".</p> <p>属于当前定义批的一部分的样本不会列在工作列表文件中。因此，无法定义该批。</p> <p>执行下列其中的一项操作：</p> <ul style="list-style-type: none"> <li>从批移除样本。</li> <li>在工作列表文件中增添样本。</li> </ul> <p>在“配置”菜单设定配置参数“<b>允许在没有工作列表条目时同样允许样本处理</b>”为“是”。仅可由“Supervisor”执行此项操作。</p>
75108	<p>Unable to assign one rack to more than one slot. A rack ID may have been used more than once.</p> <p>无法分配一个架到一个以上的槽。一个架 ID 可能使用多次。</p>	<p>It is not possible to assign the same rack file to more than one "Sample" slot.</p> <p>Deselect one "Sample" slot and repeat the assignment of the rack file.</p> <p>无法分配同一架文件予一个以上的“样本”槽。</p> <p>取消选择一个“样本”槽并重复分配架文件。</p>
75111	<p>The adapter for the selected rack type <b>QIA#19588 *EMTR</b> is not configured. If available, configure the adapter using the <b>Configuration</b> menu. If the adapter is not available select a different rack type.</p> <p>未针对选中的管架类型 <b>QIA#19588 *EMTR</b> 配置适配器。如果该类型不可用，请使用“配置”菜单配置适配器。如果适配器不可用，则选择其他管架类型。</p>	<p>The selected rack type requires an adapter that has not been configured in the list of available adapters and holders.</p> <p>If you have the adapter type that is required, update the list of available adapters and holders. See Section 6.1.3 of the <i>QIASymphony SP/AS User Manual — General Description</i> for more information.</p> <p>If you do not have the required adapter type, change the rack type assignment according to the types of adapters that are available.</p> <p>选中的管架类型需要需要一个尚未在可用的适配器和基座列表中配置的适配器。</p> <p>如果您手上有所需的适配器类型，请更新可用的适配器和基座列表。请参阅“QIASymphony SP/AS 用户手册 – 概述”第 6.1.3 节了解有关操作方法的更多信息。</p> <p>如果您手上没有所需的适配器类型，请根据可用的适配器类型更改管架类型分配。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
75403	<p>The following Assay Parameter Sets in the work list are unknown: X.</p> <p>工作列表中的下列检测参数集是未知的：X。</p>	<p>The work list contains Assay Parameter Set(s) that are not available on the QIASymphony SP/AS instruments.</p> <p>If the Assay Parameter Set(s) are not required for the assay run, continue and select the required assay(s).</p> <p>If the Assay Parameter Set(s) are required for the assay run, cancel the assay definition process. Transfer the required Assay Parameter Set(s) to the QIASymphony SP/AS instruments. See Section 8.3.3 of the <i>QIASymphony SP/AS User Manual — General Description</i> for more information.</p> <p>Check whether the Assay Parameter Set name is spelled correctly in the work list file. If required, modify the name of the Assay Parameter Set in the work list and then transfer the modified work list file to the QIASymphony SP/AS instruments.</p> <p>Restart the assay definition process.</p> <p>工作列表包括不适用于 QIASymphony SP/AS 仪器的检测参数集。</p> <p>如果对此检测运行不要求检测参数集，继续并选择所需检测。</p> <p>如果检测运行需要检测参数集，则取消检测定义处理。将所需检测参数集传输至 QIASymphony SP/AS 仪器。有关如果进行此操作的更多细节请参阅“QIASymphony SP/AS 用户手册 – 概述”第 8.3.3 节。</p> <p>检查工作列表文件中检测参数集名称是否拼写正确。如有必要，在工作列表中更改检测参数集的名称，然后将更改后的工作列表文件传输至 QIASymphony SP/AS 仪器。</p> <p>重新启用检测定义处理。</p>
75503	<p>Your current process configuration does not allow you to clear an assignment of an X to a sample which is linked to this Y in the work list.</p> <p>您当前的处理配置不允许您清除此工作列表中将 X 分配到与此 Y 相关联的样本。</p>	<p>This sample is linked to the Assay Control Set/Assay Parameter Set in the work list.</p> <p>Either use the assignments in the work list, or the “Supervisor” can set the parameter <b>Allow information for single samples in work lists to be overwritten?</b> to <b>Yes</b> in the <b>General Process</b> tab of the <b>Configuration</b> menu.</p> <p>此样本在工作列表中与检测对照集/检测参数集相关联。</p> <p>或使用工作列表中的分配，或“Supervisor”在“配置”菜单的“常规处理”标签中将参数“<b>允许工作列表中单个样本信息被覆盖？</b>”设为“是”。</p>
75505	<p>Your current process configuration does not allow you to assign an X to a sample which is not linked to this Y in the work list.</p> <p>您当前的处理配置不允许您在工作列表中将 X 分配到与此 Y 相关联的样本。</p>	<p>The sample is not linked to the Assay Control Set/Assay Parameter Set in the work list.</p> <p>Either use the assignments in the work list, or set the parameter <b>Allow information for single samples in work lists to be overwritten?</b> to <b>Yes</b> in the <b>Configuration</b> menu.</p> <p>此样本在工作列表中不关联检测对照集/检测参数集。</p> <p>或使用工作列表中的分配，或在“配置”菜单中将参数“<b>允许工作列表中单个样本信息被覆盖？</b>”设为“是”。</p>
76202	<p>An unknown kit bar code has been entered.</p> <p>输入了一个未知的试剂盒条形码。</p>	<p>Ensure that the entered bar code is either a QIAGEN bar code or that it meets the requirements for a custom bar code, as described in “Defining customized kit bar codes” in Section 2.5.1 of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i>.</p> <p>确保输入的条形码为一个 QIAGEN 条形码或其符合 <i>QIASymphony SP/AS 用户手册 – 操作 QIASymphony AS</i> 第 2.5.1 节中“定义自定义试剂盒条形码”所描述的自定义条形码要求。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
76203	The kit bar code has not been entered for every assay. Do you want to continue? 对于每个检测，不必都输入试剂盒条形码。您想继续吗？	Only one kit bar code for a multi-assay run has been entered or scanned. If this was on purpose because the other assays do not have kit bar codes, press <b>Yes</b> to continue. If this was not on purpose and the other assays do have kit bar codes, return to the <b>Loading reagents</b> screen list view and enter or scan the kit bar code(s) for the other assays. 对于一个多检测运行，只能输入或扫描一个试剂盒条形码。 如果是故意的并且其他检测也没有试剂盒条形码，点击“ <b>是</b> ”继续。 如果不是出于此目的并且其他检测均有试剂盒条形码，请返回至“ <b>加载试剂</b> ”界面列表视图中输入或扫描其他检测的试剂盒条形码。
76611	You selected X samples for processing in this batch. However, the calculation of the required reagents and consumables was based on Y samples. The new sample count might require additional reagents or consumables which must be loaded before starting the run. To avoid this, press <b>No</b> and reduce the number of selected samples. Do you want to continue anyway? 您在此批中选择 X 样本进行处理。但是，所需试剂和耗材量的计算是基于 Y 样本。新样本计数可能要求必须在开始运行前加载的额外试剂或耗材。为避免出现这种情况，请点击“ <b>否</b> ”并减少选中样本的数目。无论如何您都想继续吗？	More samples were assigned to a protocol than were defined in the <b>Wizard/ACS and Number of Samples</b> screen. Perform one of the following: Press <b>No</b> and unassign some samples. Try again. Press <b>Yes</b> and complete the Wizard. Then press <b>R+C</b> and check whether there are any missing reagents or consumables. 在“向导/ACS 和样本数”界面中可分配多于定义数量的样本到一个程序中。 执行下列其中的一项操作： 点击“ <b>否</b> ”，且不分配某些样本。重试。 点击“ <b>是</b> ”并完成向导。然后点击“ <b>R+C</b> ”并检查试剂或耗材是否存在任何缺失。
100011	Reference point X RP Y was not recognized. 参考点 X RP Y 未识别。	Restart the run. If this does not resolve the error, restart the QIAasymphony SP/AS instruments. If the problem persists, contact QIAGEN Technical Services. 重启运行。如果这并不解决错误，请重启 QIAasymphony SP/AS 仪器。 如果问题持续存在，请联系 QIAGEN 技术服务部门。
130725	Removing tips into waste failed: X. 卸除吸头到废弃物中失败：X。	A Z-drive movement error occurred while discarding tips. Check the tip chute and the tip disposal bag. 在弃置吸头过程中发生 Z 驱动位移错误。 检查吸头置槽和墙头处理袋。
130906	The batch timer W has been expired before it was evaluated. Nominal time span: X, actual time span: Y, timer overrun sec: Z. 批计时器 W 在其被评估前已过期。标定时间段：X，实际时间段：Y，计时器覆盖秒数：Z。	The time required for a protocol step was exceeded. <b>Note:</b> Do not pause the run for an extended period of time. Inventory scans (e.g., inventory scan of the “Eluate” drawer) may result in the lysis time being exceeded. All samples in the corresponding batch will be flagged as “unclear”. 程序步骤所需的时间超时。 <b>注意：</b> 在延长时间，不得暂停运行。库存扫描可能导致裂解时间超时（例如：库存扫描“洗脱物”抽屉）。相应批中的所有样本将标记为“不定”。

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
140036	<p>Not enough liquid available. Sample volume is too small.</p> <p>Or</p> <p>Not enough liquid available Slot x PosY Reagent Z.</p> <p>无足够液体可用。样本体积过少。</p> <p>或</p> <p>槽 X 位 Y 试剂 Z 无足够液体可用</p>	<p>This error code can occur during operation of the QIASymphony SP and during operation of the QIASymphony AS.</p> <p>Samples may be flagged as “unclear” or “invalid”.</p> <p><i>For the QIASymphony SP:</i></p> <p>Be sure to insert and to define the sample tube. Use only compatible sample tubes or plates. For more information about compatible sample tubes and plates, see <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>.</p> <p>Make sure that sample tubes and plates fit correctly in the tube/plate carrier. Use an appropriately sized vessel for the sample volume.</p> <p><b>Note:</b> Be sure to use at least the minimum sample volume required for the protocol. Refer to the handbook of the QIASymphony Kit you are using for more information about sample amounts and volumes.</p> <p><i>For the QIASymphony AS:</i></p> <p>Ensure that the correct tube type is used. Ensure that there are no bubbles on the surface of the liquid. If necessary centrifuge the tube to remove any bubbles. Ensure that the required amount of liquid is available and that the tube is positioned correctly. If necessary, add more liquid.</p> <p>此错误代码可发生于 QIASymphony SP 和 QIASymphony AS 的运行过程中。</p> <p>样本可能被标记为“不定”或“无效”。</p> <p>对于 QIASymphony SP：</p> <p>确保插入并定义样本试管。仅使用可兼容的样本试管或孔板。有关兼容样本试管和孔板的更多信息，请访问 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>。</p> <p>确保样本试管和孔板正确匹配试管/孔板/托架中的。使用符合样本体积的适合大小的试管。</p> <p>注意：确保对于该程序至少使用样本所需最低的体积。参考您正在使用的 QIASymphony 试剂盒手册，您可了解更多有关样本量和体积的信息。</p> <p>对于 QIASymphony AS：</p> <p>确保使用正确的试管类型。确保液体表面无泡沫。如有必要，离心试管以去除泡沫。确保足够液体体积，并确保试管放置到位。如有必要，可加更多液体。</p>
140055	<p>Wrong number or position of tube cartridges detected in the extractor.</p> <p>检测到提取器中的试管条的错误编号或位置。</p>	<p>The number of sample prep cartridges in the inventory differs from the number detected by the sensors on the magnetic head. This could be due to incorrect placement of sample prep cartridges, or sample prep cartridges could have been lost during transfer.</p> <p>Check the worktable, execute clean up, and restart the batch.</p> <p>目录中的样本制备卡夹数目不同于通过磁头传感器在检测到的数目。这可能是由于样本支配条未放置正确，或样本制备卡夹在转移过程中丢失。</p> <p>检查工作台，进行清洁工作，并重启批。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
140056	Wrong number of rodcover detected on rodcover plate in the extractor. 在提取器中，检测到磁棒套孔板上磁棒套数目错误。	The number of 8-Rod Covers detected in the inventory differs from those detected by the sensors on the magnetic head. Check the worktable, perform worktable cleanup and restart the batch. 目录中的 8 位磁棒套数目不同于磁头传感器检测到的数目。 检查工作台，进行清洁工作，并重启批。
140057	The system detected that there are still 8-Rod Covers on the rodcover plate in the extractor after unloading all rodcover. 卸载所有磁棒套后，系统检测到提取器中的磁棒套孔板上仍然有磁棒套。	Perform the automatic cleanup procedure in the maintenance dialog to clean up the instrument. Afterwards setup a new run. If the problem persists, contact QIAGEN Technical Services. 通过维护对话框进行自动清洁步骤，清洁仪器。如果问题仍然存在，请联系 QIAGEN 技术服务部。
140060	Heating/cooling temperature on slot X not reached within Y seconds. 在 Y 秒内槽 X 未达到加热/冷却温度。	A problem occurred during heating or cooling of the samples. <b>Note:</b> Do not pause the run during the lysis step. Inventory scans (e.g., inventory scan of the "Eluate" drawer) may result in the lysis time being exceeded. All samples in the corresponding batch will be flagged as "unclear". The lysis station did not reach the preset lysis temperature before the lysis step started. Restart the QIAsymphony SP. This error is logged in the result file. All samples in the corresponding batch will be flagged as "unclear". If the error persists, contact QIAGEN Technical Services. 在样本加热或冷却过程中发生了错误。 注意：在裂解步骤过程中无法暂停运行。库存扫描（如“洗脱物”抽屉的目录扫描）可能导致裂解时间超时。相应批中的所有样本将标记为“不明确”。 裂解台在启动裂解步骤前未达到预置的裂解温度。重启 QIAsymphony SP。 此错误记入结果文件中。相应批中的所有样本将标记为“不明确”。 如果问题持续存在，请联系 QIAGEN 技术服务部。
180038	Slot cooling supervision detected temperature violation begin for slot Rxn X Drawer\$RackCarrier-Y. 槽冷却管理功能检测到温度开始偏离 slot Rxn X Drawer\$RackCarrier-Y	Ensure that the adapters are precooled to 4°C before placing them on the cooling positions. 请确保适配器在放置到冷却位置之前已经预冷到 4°C。 Ensure that the operating conditions meet the specifications as described in Appendix A of the <i>QIAsymphony SP/AS User Manual — General Description</i> . 确保运行条件符合“QIAsymphony SP/AS 用户手册 – 概述”附录 A 中所列的规格。 If the error persists, contact QIAGEN Technical Services. 如果问题持续存在，请联系 QIAGEN 技术服务部。

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
266005	<p>X input position(s) do(es) not contain enough liquid in order to process the configured run. Check sample volumes, assay definitions, and assignments of sample to assay definitions.</p> <p>X 输入位置未包含足够的液体足以处理配置运行。检查样本体积、检测定义和检测定义的样本分配。</p>	<p>The sample volume is insufficient for the assay(s) and/or number of replicates.</p> <p>Check if the sample volume corresponds to the sample volume defined in the <b>Sample Rack Layout</b> screen.</p> <p>Provide sufficient sample volume and update the volume information for the sample rack.</p> <p>Alternatively assign a different Assay Parameter Set, remove assay assignments from samples, or change the number of replicates for samples.</p> <p>用于检测品和/或重复孔的样本体积不够。</p> <p>检查样本体积是否与“样本架布局”界面中定义的样本体积一致。</p> <p>提供足够的样本体积并更新样本架的体积信息。</p> <p>或者，分配不同的检测参数集，从样本卸除检查分配或更改样本重复孔数目。</p>
300009	<p>An error from the X was detected during initialization of the system and the system will now restart.</p> <p>在系统初始化过程中检测到 X 出现错误，此时系统将重启。</p>	<p>An error occurred during initialization.</p> <p>Restart the instrument(s).</p> <p>If the problem persists, contact QIAGEN Technical Services and provide the trace file.</p> <p>初始化过程中发生了错误。</p> <p>重启仪器。</p> <p>如果问题持续存在，请联系 QIAGEN 技术服务部并提供跟踪文件。</p>
310003	<p>File transfer has not been processed. No instruments are configured in the automatic transfer file configuration file “X” of the QIAsymphony Management Console.</p> <p>尚未进行文件传输。在 QIAsymphony 管理控制台的自动传输文件配置文件“X”中未配置仪器。</p>	<p>File transfer cannot be processed.</p> <p>Check the configuration of the <b>Automatic File Transfer</b> tool in the QIAsymphony Management Console. Ensure that the QIAsymphony SP/AS instruments are configured for <b>Automatic File Transfer</b>. For more information, see Section 8 of the <i>QIAsymphony Management Console User Manual</i>.</p> <p>无法进行文件传输。</p> <p>在 QIAsymphony 管理控制台检查“自动文件传输”工具的配置。确保 QIAsymphony SP/AS 仪器配置了“<b>自动文件传输</b>”。有关操作方法的更多细节，请参阅 QIAsymphony 管理控制台用户手册第 8 节。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
330005	<p>The entered bar code of the rack is already in use in a rack file associated with another drawer and therefore cannot be used on this drawer.</p> <p>输入的架条形码已在与另一抽屉相关联的架文件中使用，因此无法在本抽屉上使用。</p>	<p>A rack with this bar code has been used previously. The following situations may have occurred:</p> <p>The bar code was used for a sample rack on the QIASymphony SP and was then used for an eluate rack on the QIASymphony AS.</p> <p>The bar code was used for an eluate rack on the QIASymphony SP and afterwards for a sample rack on the QIASymphony SP.</p> <p>The bar code was used for an assay rack on the QIASymphony AS and then for a sample rack on the QIASymphony SP.</p> <p>Use a different bar code for the rack.</p> <p>有此条形码的架先前已经使用。</p> <p>可能发生了以下情形：</p> <p>条形码用于 QIASymphony SP 上的样本架，然后用于 QIASymphony AS 上的洗脱架。</p> <p>条形码用于 SP 上的洗脱架，此后用于 SP 上的样本架</p> <p>条形码用于 QIASymphony AS 上的检测架，然后用于 QIASymphony SP 上的样本架。</p> <p>对管架使用不同的条形码。</p>
330007	<p>Rack file for rack X does not match the requirements for a QIASymphony rack file format.</p> <p>架 X 的架文件不符合 QIASymphony 架文件格式的要求。</p>	<p>The rack file has a format that is incompatible with the QIASymphony SP/AS instruments.</p> <p>Ensure that the rack file has the correct format. Use the <b>CSV Conversion</b> tool of the QIASymphony Management Console to do this. See Section 8.12 of the <i>QIASymphony SP/AS User Manual — General Description</i> for more details.</p> <p>架文件的格式与 QIASymphony SP/AS 仪器上的不兼容。</p> <p>确保架文件有正确的格式。使用 QIASymphony 控制管理台的“CSV 转化”工具进行此操作。更多细节请参阅“QIASymphony SP/AS 用户手册 - 概述”第 8.12 节。</p>
330015	<p>Rack file for ID X is locked by another system.</p> <p>ID X 的架文件被另一系统锁定。</p>	<p>The QIASymphony SP and the QIASymphony AS are trying to use the same rack file at the same time. To avoid corruption of rack files, this is not allowed.</p> <p>Do not attempt use the same rack file at the same time on the QIASymphony SP and the QIASymphony AS.</p> <p>架文件当前正在使用中并处于锁定状态。</p> <p>如果 QIASymphony 仪器崩溃，请重启仪器，系统将解锁锁定的架文件。</p>
330023	<p>The rack file for rack X cannot be removed, because it is locked.</p> <p>无法删除架 X 的架文件，因为其被锁定。</p>	<p>The rack file is currently in use.</p> <p>Wait for the end of the run, when the rack file will not be in use.</p> <p>If the QIASymphony instrument(s) crashed, restart the instrument(s) and the system will unlock the locked rack files.</p> <p>架文件当前正在使用中。</p> <p>当架文件将不在使用中时，等待运行结束。</p> <p>如果 QIASymphony 仪器崩溃，请重启仪器，系统将解锁锁定的架文件。</p>

Error code 错误代码	Description 描述	Comments and suggestions 意见与建议
330024	The rack file for rack X cannot be updated, because it is locked. 无法更新架 X 的架文件，因为其被锁定。	The rack file is currently in use and locked. If the QIASymphony instrument(s) crashed, restart the instrument(s) and the system will unlock the locked rack files. 架文件当前正在使用中并处于锁定状态。 如果 QIASymphony 仪器崩溃，请重启仪器，系统将解锁锁定的架文件。

## 13.5 General errors that do not have error codes 无错误代码的一般错误

Error 错误	Comments and suggestions 意见与建议
The startup screen does not appear and the status LEDs are not illuminated. 启动界面未出现，状态 LED 灯未亮	Contact QIAGEN Technical Services. 请联系 QIAGEN 技术服务部。
Error occurs during an assay run. 检测运行过程中发生错误	An assay run was in progress on the QIASymphony AS and an error occurred. The QIASymphony SP/AS instruments must be switched off. Upon restarting the instruments it is not possible to continue with the assay run or a protocol that was in progress at the same time on the QIASymphony SP. QIASymphony AS 正在运行一个检测时发生错误。必须切断 QIASymphony SP/AS 仪器电源。重启仪器后，无法继续检测运行或同时在 QIASymphony SP 上运行的程序。
Error occurs during a protocol. 程序过程中发生错误	If a protocol was in progress on the QIASymphony SP and an error occurs, the QIASymphony SP/AS instrument must be switched off. Upon restarting the instruments, it is not possible to continue with the protocol or an assay run that was in progress on the QIASymphony AS. For information on how to continue with manual assay setup, see Section 2.13 of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i> . 如果 QIASymphony SP 上正在运行一个程序时发生错误，则必须关闭 QIASymphony SP/AS 仪器。重启仪器后，无法继续检测运行或同时在 QIASymphony SP 上运行程序。 有关如何手动继续检测创建的细节，请参阅《QIASymphony SP/AS 用户手册 - 概述》第 2.13 节。
No run time estimation shown in <b>Overview</b> screens ( <b>Sample Preparation, Assays Setup, or Integrated Run</b> tab). “概览” (“样本制备”、“检测构建”或“集成运行”标签)界面上不显示预估运行时间	Run time estimation is based on the stored run times from previous, valid runs with identical settings. Changes of some settings (e.g., sample/assay point number or assay specifications) may lead to a missing run time estimation. 预估运行时间基于系统中存储的之前同等设置的有效运行的时间。更改部分设置（例如，样本/检测点数目或检测规范）后，可能导致预估运行时间缺失。



### 13.5.1 File handling errors

Error 错误	Comments and suggestions 意见与建议
Connection between Management Console and the instrument cannot be established. 无法建立管理控制台和仪器之间的连接。	<p>Make sure that the QIASymphony SP/AS instruments are switched on and that the instruments are properly connected to the network.</p> <p>Certain antivirus software has the functionality to monitor and filter communication on port 80 (HTTP). This may lead to communication problems between the QIASymphony Management Console and the instrument.</p> <p>Possible solutions:</p> <p>Change the communications port on the instrument from port 80 to another port.</p> <p>Disable the HTTP port filtering function in the antivirus software.</p> <p>For more information about errors that may occur when using the Management Console, see the <i>QIASymphony Management Console User Manual</i>.</p> <p>确保 QIASymphony SP/AS 仪器打开，并确保仪器正确连接到网络。</p> <p>某些杀毒软件具有监测和过滤 80 端口(HTTP)上的通信的功能。这会导致管理控制台和仪器之间的通信出现问题，</p> <p>可能的解决办法</p> <ul style="list-style-type: none"><li>更改仪器上的通信端口，从 80 端口移至其他端口。</li><li>在杀毒软件中禁用 HTTP 端口过滤功能。</li></ul> <p>有关使用管理控制台时可能发生错误的更多信息，请参阅 QIASymphony 管理控制台用户手册。</p>
USB stick or other USB device was not recognized. USB 盘或其他 USB 设备未被识别。	<p>Only use the USB stick provided with the QIASymphony SP. Try connecting the USB stick to the other USB port. Restart the QIASymphony SP/AS instruments.</p> <p>If the problem persists, contact QIAGEN Technical Services.</p> <p><b>Note:</b> For file transfer, use the QIASymphony Management Console.</p> <p>只能使用 QIASymphony SP 随附的 USB 盘。可尝试将 USB 盘连到其他 USB 接口，然后重启 QIASymphony SP/AS 仪器。</p> <p>如果问题持续存在，请联系 QIAGEN 技术服务部门。</p> <p><b>注意：</b>文件传输请使用 QIASymphony 管理控制台。</p>
Signature invalid. 签名无效	<p>During file transfer via a USB stick, all Assay Control Sets are loaded again. If an Assay Control Set is unsigned, the error message <b>Signature invalid</b> will be displayed. However, the name of the invalid file is not given. The newly transferred file could be invalid, but this is not necessarily the case.</p> <p>For protocols and Assay Control Sets only, check the validity in the QIASymphony Management Console. Delete any unsigned protocols or Assay Control Sets. Do not delete other file types.</p> <p>在通过 USB 盘进行文件传输时，将重新加载所有的检测对照集。如果检测对照集未被分配，将显示错误消息“<b>签名无效</b>”。但是，不会给出无效文件的名称。新近的传输文件可能是无效的，但不是绝对的。</p> <p>仅对于程序和检测对照集，检查其在 QIASymphony 管理控制台的有效性。删除任何未署名的程序或检测对照集。不得删除其他文件类型。</p>

### 13.5.2 File errors 文件错误

#### General file errors 一般文件错误

Error 错误	Comments and suggestions 意见与建议
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Error 错误	Comments and suggestions 意见与建议
File not transferred. 文件未被传输。	Check that the file is in the correct folder on the USB stick. 检查文件在 USB 盘上是否处于正确的文件夹中。
File not correctly converted. 文件未被正常转化。	Check that the content of the file and the general structure meets the requirements of the <b>CSV Conversion</b> tool of the QIASymphony Management Console. 检查文件内容和基本结构是否符合 QIASymphony 管理控制台 “CSV 转化” 工具的要求。
Invalid check sum. 校验和无效	Ensure that the file was created by the QIASymphony SP/AS instruments or using the QIASymphony Management Console. 确保该文件由 QIASymphony SP/AS 仪器或使用 QIASymphony 管理控制台创建。

### Rack file errors 架文件错误

Error 错误	Comments and suggestions 意见与建议
Rack file could not be loaded. 架文件无法加载。	Ensure that the rack file has been uploaded to the QIASymphony SP/AS instruments. Check the parameter <b>Ready for AS</b> . This parameter should be set to <b>Yes</b> .  If it is not set to <b>Yes</b> , the rack file must be modified. To do this, convert the *.xml file to *.csv format using the <b>CSV Conversion</b> tool of the QIASymphony Management Console. Then, correct the parameter using Microsoft® Excel® or Notepad. See Section 8.12 of the <i>QIASymphony SP/AS User Manual — General Description</i> for more information. 确保架文件已从 QIASymphony SP/AS 仪器移除。 检查参数 “ <b>准备 AS</b> ”。此参数应当设为 “ <b>是</b> ”。 如果此项未被设为 “ <b>是</b> ”，则您必须更改架文件。为此，请使用 QIASymphony 管理控制台的 “ <b>CSV 转化</b> ” 工具转化 *.xml 文件为 *.csv 格式。然后使用 Microsoft® Excel® 或 Notepad 修改参数。更多细节请参阅 “QIASymphony SP/AS 用户手册 – 概述” 第 8.12 节。
Rack file contains wrong labware. 架文件包括错误器具。	Ensure that the racks/tubes and adapters that are written in the rack file are compatible with the QIASymphony SP/AS instruments. For a full list of compatible racks and adapters, visit <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a> .  Ensure that the names of the racks and adapters are correctly spelled and that there are no incorrect blanks at the beginning or the end of the names. 确保架文件中写入的架/试管和适配器与 QIASymphony SP/AS 仪器的相兼容。要查看可用架和适配器的完整清单，请访问 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a> 。 确保架和适配器的名称正确拼写，及在名的开头或结尾不存在不正确的空格。
Sample positions are incorrect. 样本位置不正确。	For a user-generated rack file convert the *.xml file back to *.csv format using the <b>CSV Conversion</b> tool of the QIASymphony Management Console. Correct the positions of the samples using Microsoft Excel or Notepad.  Ensure that the correct rack file is selected. 对于用户生成的架文件，请使用 QIASymphony 管理控制台的 “ <b>CSV 转化</b> ” 工具将 *.xml 文件转回 *.csv 格式。使用 Microsoft® Excel® 或 Notepad 修改样本位置。 确保选择了正确的架文件。
Rack file could not be found. 未发现架文件	Ensure that the correct rack file has been transferred to the QIASymphony SP/AS instruments. Ensure that the correct rack file has been transferred to the QIASymphony SP/AS instruments before starting assay definition.  The rack file must be in a format that can be recognized by the QIASymphony SP/AS instruments (i.e., *.xml). Ensure that the rack file has been converted from *.csv format to *.xml format using the <b>CSV Conversion</b> tool of the QIASymphony Management Console. 确保已将正确的架文件传输至 QIASymphony SP/AS 仪器。 在启动检测定义前，请确保已将正确的架文件传输至 QIASymphony SP/AS。 架文件格式（即，*.xml）必须可被 QIASymphony SP/AS 仪器识别。确保已使用 QIASymphony 管理控制台将架文件从 *.csv 格式转为 *.xml 格式。

Error 错误	Comments and suggestions 意见与建议
Content of system generated file is wrong. 系统生成文件内容有误。	Check whether actualization is correct. Ensure that no errors occur during the process. 检查结果是否正确。 确保在处理过程中无错误发生。

### Work list errors

#### 工作列表错误

Error 错误	Comments and suggestions 意见与建议
Work list could not be found. 未发现工作列表	Ensure that the correct work list has been transferred to the QIASymphony SP/AS instruments before starting assay definition. Ensure that the work list has been converted to *.xml format using the <b>CSV Conversion</b> tool of the QIASymphony Management Console. If using the QIASymphony AS, ensure that the work list has not expired. Press <b>Assay Lists</b> and check if the required Assay Parameter Set(s) are listed. If the required Assay Parameter Set(s) are listed, the work list has probably expired. 在启动检测定义前, 请确保已将正确的架文件传输至 QIASymphony SP/AS。 确保已使用 QIASymphony 管理控制台的 “ <b>CSV 转化</b> ” 工具将架文件转为 *.xml 格式。 如果使用 QIASymphony AS, 请确保工作列表尚未过期。点击 “ <b>检测列表</b> ” 并检查是否列出所需的检测参数集。如果列出了所需的检测参数集, 则工作列表可能已过期。
Assay list does not display expected Assay Parameter Set. 检测列表未显示期望的检测参数集	Ensure that the work list has not expired. Press <b>Assay Lists</b> and check if the required Assay Parameter Set(s) are listed. If the required Assay Parameter Set(s) are listed, the work list has probably expired. Ensure that the Assay Parameter Set(s) and Assay Definition files that are defined in the work list have been transferred to the QIASymphony SP/AS instruments before starting assay definition. Ensure that the name and unique ID of the Assay Parameter Set that is defined in the work list is identical to the name and unique ID that is defined in the Assay Parameter Set. 确保工作列表尚未过期。点击 “ <b>检测列表</b> ” 并检查是否列出所需的检测参数集。如果列出了所需的检测参数集, 则工作列表可能已过期。 确保开始检测定义前已将工作列表中定义的检测参数集和检测定义文件移至 QIASymphony SP/AS 仪器。 确保工作列表中定义的检测参数集的名称和唯一 ID 与检测参数集中定义的名称和唯一 ID 保持一致。

### Assay Parameter Set and Assay Control Set errors

#### 检测参数集和检测对照集错误

Error 错误	Comments and suggestions 意见与建议
Invalid check sum. 校验和无效	Ensure that the Assay Parameter Set/Assay Control Set was created using the QIASymphony Management Console. 确保使用 QIASymphony 管理控制台创建了检测参数集/检查对照集。

### Labware

#### 器具错误

errors

Error 错误	Comments and suggestions 意见与建议
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Error 错误	Comments and suggestions 意见与建议
The labware is not visible in the <b>Assay Setup   Sample Rack(s) and Assay Setup   Assay Rack(s)</b> screen. 器具未出现在 “ <b>检测构建   样本架</b> ” 和 “ <b>检测构建   样本架</b> ” 界面中。	<p>Check the <b>Labware Browser</b> menu (see Section 3.16 of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony SP</i> and Section 3.8 of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i>).</p> <p>Ensure that the labware file has been transferred to the <b>Labware AS</b> folder.</p> <p>Ensure that the labware file was saved in the correct folder on the USB stick (<b>data/Labware/AS/</b>).</p> <p>Ensure that the labware file has been transferred to the QIASymphony SP/AS instruments before starting assay definition.</p> <p>Check all categories of listed labware.</p> <p>检查 “<b>器具浏览器</b>” 菜单 (参阅 QIASymphony SP/AS 用户手册 – 操作 QIASymphony SP 第 3.16 节及 QIASymphony SP/AS 用户手册 – 操作 QIASymphony AS 第 3.8 节)。</p> <p>确保器具文件已被移至 “<b>器具 AS</b>” 文件夹中。</p> <p>确保器具文件保存在 USB 盘上的正确文件夹中 (<b>数据/器具/AS</b>)。</p> <p>在启动检测定义前, 请确保已将器具文件传输至 QIASymphony SP/AS。</p> <p>检查列出器具的所有类目。</p>

## Cycler file errors

### 扩增文件错误

Error 错误	Comments and suggestions 意见与建议
Cycler file is not created or is not correct for the cycler. 扩增文件未创建或不匹配 PCR 仪。	<p>The QIASymphony SP/AS instruments automatically create a cycler file when an assay run is finished. The format of the cycler file depends on the assay rack type.</p> <p>Ensure that the correct cycler file format for the assay rack(s) is defined in the Assay Parameter Set. If necessary, modify the cycler file format in the Assay Parameter Set using the <b>Process Definition</b> editor tool of the QIASymphony Management Console.</p> <p>If the required assay rack format for a particular cycler file format is not available to be selected in the QIASymphony Management Console, ensure that the available assay racks are updated in the QIASymphony Management Console. See the <i>QIASymphony Management Console User Manual</i> for more details about how to do this.</p> <p>If the problem persists, contact QIAGEN Technical Services.</p> <p>当一个检测运行结束时, QIASymphony SP/AS 仪器自动创建一个扩增文件。扩增文件的格式取决于检测架类型。</p> <p>确保检测参数集中对检测架定义了正确的扩增文件格式。如有必要, 通过 QIASymphony 管理控制台的 “<b>流程定义</b>” 编辑工具更改检测参数集中的扩增文件格式。</p> <p>如果在 QIASymphony 管理控制台中无法选择某个特定扩增文件格式的所需检测架, 请确保在 QIASymphony 管理控制台更新了可用的检测架。相关操作方法细节请参阅 QIASymphony 管理控制台用户手册。</p> <p>如果问题持续存在, 请联系 QIAGEN 技术服务部门。</p>

## Result file AS errors

### AS 结果文件错误

Error 错误	Comments and suggestions 意见与建议
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Error 错误	Comments and suggestions 意见与建议
The final result file is not created. / Only a preliminary result file is visible. 未创建最终结果文件。/ 仅初步结果文件可见。	<p>The QIASymphony SP/AS instruments create a preliminary result file when an assay run is started. The final result file is created when <b>Remove</b> is pressed at the end of an assay run.</p> <p>If using automatic transfer, check in the related folder to see if the correct printer is listed.</p> <p>Ensure that the assay run has been removed before attempting to download the result file.</p> <p>Ensure that you are looking in the correct folder for the QIASymphony SP result files or the QIASymphony AS result files. The correct folder is <b>log/Results/SP</b> or <b>log/Results/AS</b>. 当一个检测运行启动时, QIASymphony SP/AS 仪器自动创建一个初步结果文件。当在一个检测运行结束时点击“<b>卸除</b>”, 可创建最终结果文件。</p> <p>如果使用自动传输, 请检查相关文件夹查看是否列出了正确的打印机。</p> <p>确保在尝试下载结果文件前已卸除了检测运行。</p> <p>确保您正在正确的文件夹中查询 QIASymphony SP 结果文件或 QIASymphony AS 结果文件。正确的文件夹为 <b>log/Results/SP</b> 或 <b>log/Results/AS</b>。</p>

Sample status. 样本状态	<p>If errors/problems occur during an assay run, sample status can be affected.</p> <p>If samples were successfully processed, the sample status is “valid”. If the batch was paused, the samples will be “unclear” and if, for example, cooling problems occur during a run, the sample status may be “unclear”. If problems occur during master mix or sample transfer, the sample status is “invalid”.</p> <p>If a QIASymphony SP rack file is used on the QIASymphony AS, the sample status will only be changed if errors/problems occur during the assay run. If sample status is changed, the reason for this change will be recorded in the QIASymphony AS result file. The message, the message ID, and the sample status is listed in the <b>Detailed Run Information</b> section of the QIASymphony AS result file.</p> <p>如果在一个检测运行过程中发生了错误/问题, 则可影响样本状态。</p> <p>如果样本成功处理, 则样本状态为“有效”。如果, 例如运行中发生了冷却问题, 样本状态可能为“不定”。如果预混液或样本传输过程中发生问题, 则样本状态为“无效”。</p> <p>如果在 QIASymphony AS 上使用 QIASymphony SP 架文件, 则只有在如果检测运行过程中发生错误/问题时才会更改样本状态。如果样本状态更改, 则此更改的原因将记录在 QIASymphony AS 结果文件中。信息、信息 ID 和样本状态请见 QIASymphony AS 结果文件的“<b>详细的运行信息</b>”部分。</p>
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### Loading information file errors

#### 加载信息文件错误

Error 错误	Comments and suggestions 意见与建议
The loading information file is not created. 未创建加载信息文件。	<p>A loading information file should be generated after pressing <b>Queue</b>.</p> <p>Ensure that you are looking for the loading information file in the correct folder. The correct folder is <b>\log&gt;LoadingInformation</b>.</p> <p>If using the automatic file transfer tool of the QIASymphony Management Console, check in the related configuration to see if the correct printer is listed.</p> <p>加载信息文件应当在点击“<b>排队</b>”后生成。</p> <p>确保您在正确的文件夹中查询加载信息文件。正确文件为 <b>\log&gt;LoadingInformation</b>。</p> <p>如果使用 QIASymphony 管理控制台的自动文件传输工具, 请检查相关的配置查看是否列出了正确的打印机。</p>

### Log file errors

#### 日志文件错误

Error 错误	Comments and suggestions 意见与建议
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Error 错误	Comments and suggestions 意见与建议
General transfer problems. 一般传输问题	Ensure that the QIASymphony SP/AS instruments are connected to the network when using the QIASymphony Management Console for file transfer. Ensure that the USB stick is correctly plugged in and that the small LED on the USB stick is glowing. 当使用 QIASymphony 管理控制台传输文件时，请确保 QIASymphony SP/AS 仪器连接网络。 确保正确插入 USB 盘及 USB 盘上的小 LED 灯发亮。

### 13.5.3 Tip waste errors 吸头废弃物错误

Error 错误	Comments and suggestions 意见与建议
Tips are stacking in the tip chute. 吸头堆积在吸头槽内	Ensure that the tip disposal bag is empty and that it is not jammed between the drawer and the workbench. 确保吸头处理袋清空及其未被堵塞在抽屉和工作台之间。
Tips are spilled in the lab. 吸头撒落在实验室中。	Ensure that the tip disposal bag is correctly attached to the waste bag holder. 确保吸头处理袋正确连到废弃物袋固定架上。

### 13.5.4 Maintenance errors 维护错误

Error 错误	Comments and suggestions 意见与建议
Interruption of a maintenance protocol. 维护程序的中断。	It is not possible to stop a maintenance protocol after it has been started. 在启动维护后将无法停止维护程序。
Hood open. 防护罩打开	During some maintenance protocols the hood might be open. Ensure that the hood is closed afterwards. 在某些维护程序进行过程中，防护罩可能是打开着的。确保此后防护罩是关闭着的。
Wrong cleaning agents. 清洁剂错误	Only use recommended cleaning agents. Use of cleaning agents that are not recommended may result in damage to the QIASymphony SP/AS instruments. 仅使用推荐的清洁试剂。使用未推荐的清洁试剂可能导致 QIASymphony SP/AS 仪器损坏。

### 13.5.5 Configuration menu errors “配置”菜单错误

Error 错误	Comments and suggestions 意见与建议
The adapter for AS is not displayed in the configuration dialog. AS 的适配器未显示在配置对话框中。	Ensure that you have transferred the adapter file(s) to the <b>Labware AS</b> folder. 确保您已将适配器文件移至“AS 器具”文件夹中。

## 13.6 QIASymphony SP errors that do not have error codes 无错误代码的 QIASymphony SP 错误

### 13.6.1 “Eluate” drawer “洗脱物”抽屉

Error 错误	Comments and suggestions 意见与建议
Filter-tips are bent or deformed after eluate transfer. 带滤芯吸头在洗脱物转移后折弯或变形。	Be sure to define the correct type of eluate rack on the corresponding elution slot. Make sure that the elution rack is correctly positioned on the elution slot. Only use elution racks that are compatible with the specified adapter. 确保在相应洗脱槽上定义了正确类型的洗脱架。确保洗脱架正确放置到洗脱槽上。仅可使用与特定适配器兼容的洗脱架。
The inventory scan of the “Eluate” drawer detects an elution rack on “Elution slot X” although no elution rack has been placed there. 虽然无洗脱架放置到洗脱槽 X，“洗脱物”抽屉的库存扫描检测到洗脱架。	If there is an adapter on the elution slot, be sure to remove it. Do not expose the instrument to direct sunlight (see Section 4.2 of the <i>QIASymphony SP/AS User Manual — General Description</i> ). Ensure that the bar codes on the drawer can be easily read. If the error persists, contact QIAGEN Technical Services. 如果洗脱槽内有适配器，确保将其移除。不得将仪器暴露在直射日光下（请参阅“QIASymphony SP/AS 用户手册 – 概述”第 4.2 节）。 确保抽屉上的条形码可方便读取。 如果问题持续存在，请联系 QIAGEN 技术服务部。
The bar code of the elution slot/elution rack cannot be read using the handheld bar code scanner. 使用手持式条形码扫描仪无法读取洗脱槽/洗脱架的条形码	Make sure that the handheld bar code scanner is properly connected to the QIASymphony SP. Try to read other bar codes with the scanner. Make sure that all bar codes can be easily read. Define the elution slot/elution rack by manually entering the information into the touchscreen. 确保手持式条形码扫描仪正确连至 QIASymphony SP。尝试用扫描仪读取其他条形码。确保所有条形码均可方便读取。通过在触摸屏手动输入信息定义洗脱槽/洗脱架。
Tips/channels are incorrectly positioned on the elution slot during the elution step. 洗脱步骤中吸头/通道未正确放置在洗脱槽上。	Make sure to place the elution rack onto the elution slot in the correct orientation. Be sure to insert and to define the same sample tube. Only use compatible sample tubes/ racks. For more information about tubes and racks, visit <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a> . If the error persists, contact QIAGEN Technical Services. 确保洗脱架以正确姿势放置到洗脱槽上。确保插入并定义同一样本试管。仅使用兼容的样本试管/架。有关试管和架的更多信息，请访问 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a> 。 如果错误持续存在，请联系 QIAGEN 技术服务部。
The “Eluate” drawer cannot be opened. “洗脱物”抽屉无法打开	The “Eluate” drawer is locked during eluate transfer. After transfer of eluates to the elution rack, the system unlocks the “Eluate” drawer. If the “Eluate” drawer cannot be opened after eluate transfer, open the <b>Maintenance</b> menu and press the <b>Drawers</b> button under <b>Unlock</b> . If the error persists, contact QIAGEN Technical Services. “洗脱”抽屉在洗脱物转移过程中处于锁定状态。将洗脱物移至洗脱架后，系统解锁“洗脱物”抽屉。 如果在转移洗脱物后无法打开“洗脱物”抽屉，打开“ <b>维护</b> ”菜单并点击“ <b>解锁</b> ”下的“ <b>抽屉</b> ”按钮。 如果错误持续存在，请联系 QIAGEN 技术服务部。
It is not possible to define an elution rack. 无法定义一个洗脱架。	Open the “Eluate” drawer and leave the drawer open while defining an elution rack. 打开“洗脱物”抽屉，并在定义洗脱架时保持抽屉打开。

Error 错误	Comments and suggestions 意见与建议
<p>The elution drawer was opened while an inventory scan was running and the <b>Elution Rack</b> screen cannot be exited.</p> <p>当库存扫描正在运行时打开了洗脱抽屉，“洗脱架”界面无法退出。</p>	<p>The scan of the “Eluate” drawer is queued and will be performed as soon as the current inventory scan has finished.</p> <p>把“洗脱物”抽屉扫描正在排队，并在当前库存扫描结束后即可进行。</p>
<p>Eluates are not in the corresponding elution rack as described in the result file.</p> <p>洗脱物不在如结果文件所描述的相应洗脱架中。</p>	<p>Wait for the protocol to finish.</p> <p>Be sure to set up the elution rack with well A1 at the upper left corner.</p> <p>等待程序完成。</p> <p>确保设置孔 A1 位于洗脱架的左上角。</p>
<p>After closing the “Eluate” drawer, the information about the elution rack entered by the user was not stored by the system and an error message is displayed after performing the inventory scan.</p> <p>关闭“洗脱物”抽屉后，系统未保存用户输入的洗脱架相关信息，并且在执行库存扫描后出现错误消息</p>	<p>After you have entered information about the elution rack, press the <b>Add</b> button before you close the drawer so that the changes to the information are saved.</p> <p>在您已输入洗脱架相关的信息后，在关闭抽屉前点击“<b>添加</b>”按钮，这样可保存更改。</p>
<p>After starting and closing the <b>Eluate Drawer</b> dialog without changes the inventory scan of the “Eluate” drawer starts.</p> <p>启动并在未做更改的情况下关闭“洗脱物抽屉”对话框后，“洗脱物”抽屉库存扫描开始。</p>	<p>This is the correct behavior if you open and close the hood and press <b>No, nothing changed</b> on the displayed message box. After this, a full scan will be performed on leaving the <b>Eluate Drawer</b> dialog without changes.</p> <p>如果您打开并关闭防护罩，然后在显示的消息对话框中点击“<b>否，未做更改</b>”，这是正常现象。之后，将会在不更改“<b>洗脱物抽屉</b>”对话框的情况下，进行一次完整的库存扫描。</p>

### 13.6.2 “Sample” drawer “样本”抽屉

Error 错误	Comments and suggestions 意见与建议
<p>Sample carrier locks do not release and/or bar code reader does not move forward.</p> <p>样本管架锁定未解除和/或条形码阅读器未前移</p>	<p>Make sure that the QIASymphony SP is switched on and the LEDs in the “Sample” drawer are illuminated green. Be sure to insert all tube/plate carriers with the bar codes oriented to the left. Move the carrier up to the stop line and wait. Make sure that all bar codes can be read. If this does not resolve the problem, restart the QIASymphony SP/AS instruments.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>确保 QIASymphony SP 开关打开且“样本”抽屉中的 LED 灯为绿色。确保将所有带条形码的试管/孔板托架均朝向左放。将托架上移至停止线并等待。确保所有条形码均可读取。如果这仍无法解决问题，请重启 QIASymphony SP/AS 仪器。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>



Error 错误	Comments and suggestions 意见与建议
Tube/plate carrier is locked in place and cannot be removed. 试管/孔板托架锁死，无法卸除	Open the <b>Maintenance SP</b> menu and press the <b>Sample carrier</b> button under <b>Unlock</b> . 打开“ <b>SP 维护</b> ”菜单并点击“ <b>解锁</b> ”下的“ <b>样本管架</b> ”按钮。
Tube/plate carrier was not recognized during loading. 试管/孔板托架在加载过程中未被识别	Remove the tube/plate carrier and load it into the QIASymphony SP again. Slide the carrier continuously into the “Sample” drawer. Make sure that all bar codes are oriented to the left and that bar codes can be read. If you are using duplicate sample bar codes do not place them next to each other in the sample carrier. In this case, place different sample bar codes between the identical ones. If the error persists, contact QIAGEN Technical Services. 卸除试管/孔板托架并再次加载到 QIASymphony SP 中。连续滑动托架至“ <b>样本</b> ”抽屉中。确保所有条形码均朝向左放及条形码可被读取。 如果您正使用重复孔，样本条形码不应在样本管架中彼此靠近放置。在这种情况下，在相同的重复之间给予不同的样本条形码。 如果错误持续存在，请联系 QIAGEN 技术服务部。
Sample bar codes are not read properly. 样本条形码读取不正确	Only use compatible bar codes. Refer to Appendix A of the <i>QIASymphony SP/AS User Manual – General Description</i> for detailed information about compatible bar codes. Be sure that bar codes can be easily read and are oriented to the left. Be sure to position the bar code at an appropriate height in the rack. Make sure that the bar code fits into the cut-out of the tube carrier and position the bar code at the height of the plate carrier’s bar codes. 仅可使用兼容的条形码。请参考“QIASymphony SP/AS 用户手册 – 概述”附录 A 获取有关兼容条形码的详细信息。 确保条形码可方便读取及朝向左放。 确保将条形码置于架中的合适高度。确保条形码恰好固定在试管托架，并在托架条形码的顶点放置条形码。
Samples have been physically removed from the system but a result file cannot be downloaded. 已从系统物理卸除样本，但结果文件无法下载	The sample information is stored until the elution rack is removed from the inventory or the system is switched off. Some information about samples that have been removed but which are still stored in the inventory is displayed in the <b>Sample View</b> screen of the <b>Sample Preparation</b> menu. In order to download a result file containing detailed information about the samples, remove the corresponding elution rack from the inventory. 在从库存清除洗脱架或关闭系统之前均会保存样本信息。有关已被卸除但仍存在于库存中的样本的信息显示于“概览”界面的“样本视图”标签中。 要下载包含详细样本信息的结果文件，则从库存中删除相应的洗脱架。

### 13.6.3 “Waste” drawer

#### “废弃物”抽屉

Error 错误	Comments and suggestions 意见与建议
Liquid in the “Waste” drawer. “废弃物”抽屉中存在液体	Check that the lid of the liquid waste container has been removed. Make sure to insert the liquid waste container in the correct orientation. If the liquid waste container overflowed, contact QIAGEN Technical Services. 检查是否已去除了废液容器盖子。确保以正确位姿插入废液容器。如果废液容器溢出，请联系 QIAGEN 技术服务部。

Error 错误	Comments and suggestions 意见与建议
<p>"Waste" drawer cannot be opened. “废弃物”抽屉无法打开</p>	<p>The "Waste" drawer is locked during a run and during the inventory scan. If the drawer cannot be opened after the protocol has finished, open the <b>Maintenance SP</b> menu and select <b>Drawers</b> under <b>Unlock</b>.</p> <p>If the problem persists contact QIAGEN Technical Services. “废弃物”抽屉在运行和库存扫描过程中处于锁定状态。如果程序结束后抽屉无法打开，请打开“<b>维护 SP</b>”</p> <p>菜单并选择“<b>解锁</b>”下的“<b>抽屉</b>”。</p> <p>如果问题持续存在，请联系 QIAGEN 技术服务部门。</p>
<p>"Waste" drawer cannot be closed. “废弃物”抽屉无法关闭</p>	<p>Make sure to place the liquid waste container in the "Waste" drawer at the right-hand side of the drawer. Remove the lid of the liquid waste container before you place it in the "Waste" drawer. 确保将废液容器放置在“废弃物”抽屉的右侧。在将其放置到“废弃物”抽屉前，您应去除废液容器的盖子。</p>

### 13.6.4 "Reagents and Consumables" drawer

#### “试剂和耗材”抽屉

Error 错误	Comments and suggestions 意见与建议
<p>The "Reagents and Consumables" drawer cannot be opened. “试剂和耗材”抽屉无法打开</p>	<p>The "Reagents and Consumables" drawer is locked during a run and during the inventory scan. If the drawer still cannot be opened after the protocol has finished, open the <b>Maintenance SP</b> menu and select <b>Drawers</b> under <b>Unlock</b>.</p> <p>Be sure that both piercing devices/reagent cartridges have been moved to the lower position. If not, open the <b>Maintenance SP</b> menu and select <b>Piercing Device 1/2 down</b> under <b>Move</b>.</p> <p>If the problem persists contact QIAGEN Technical Services.</p> <p><b>Note:</b> Do not use force to open the drawer. “废弃物”抽屉在运行和库存扫描过程中处于锁定状态。</p> <p>如果程序结束后抽屉仍无法打开，请打开“<b>维护 SP</b>”菜单并选择“<b>解锁</b>”下的“<b>抽屉</b>”。</p> <p>确保穿孔装置/试剂条均已移至下位。若不是，打开“<b>维护 SP</b>”菜单并选择“<b>移动</b>”下的“<b>穿孔装置 1/2 向下</b>”。</p> <p>如果问题持续存在，请联系 QIAGEN 技术服务部门。</p> <p>注意：不得强施外力打开抽屉。</p>
<p>Reagent cartridge cannot be placed in the "Reagents and Consumables" drawer. 试剂条不可放置在“试剂和耗材”抽屉中</p>	<p>Make sure that the correct inserts for the reagent cartridges are in the "Reagents and Consumables" drawer and that the reagent cartridge is inserted in the right orientation. 确保试剂条的正确垫片位于“试剂和耗材”抽屉中及试剂条朝右插入。</p>

### 13.6.5 Errors that may occur when starting a batch/run 当开始一个批/运行时可能发生的错误

Error 错误	Comments and suggestions 意见与建议
Run button is inactive. 运行按钮未按下	Make sure that the tube/plate carrier has been loaded and that the batch status is <b>QUEUED</b> . 确保已加载了试管/孔板托架及批状态为“排队”。
One or more batches cannot be queued. 一个或多个批无法排入排队	The system detected 2 or more samples with the same sample ID. Make sure the sample ID is unique. Sample ID could not be read during loading of the tube/plate carrier. Remove the tube/plate carrier and reload it more slowly. Make sure that all bar codes are oriented to the left and are readable. 系统检测到 2 个或多个有相同样本 ID 的样本。确保样本 ID 是唯一的。 样本 ID 在加载试管/孔板托架过程中无法读取。卸除试管/孔板托架并较为缓慢地重新装载。确保所有条形码朝向左方并可读取。
Samples in the tube carrier are not detected by the system although they have been loaded. 试管托架中的样本未被系统检测到，尽管它们已经加载。	The bar code of the tube carrier could not be properly read by the system. Remove the carrier and insert again more slowly. Remember to pause at the stop line. 试管托架条形码未被系统正确读取。 卸除托架并较为缓慢地再次插入。记住在停止线处停留。
Wrong sample IDs are shown in sample view. 样本视图中显示错误的样本 ID	If two or more tube carriers are inserted: Remove all carriers. Insert a carrier and wait until the bar code camera has returned to its home position and the corresponding batch has changed state. Insert remaining carriers in the same way. Before inserting a new carrier, wait until the corresponding batch has changed state. 如果插入两个或两个以上的试管托架： 卸除所有托架。 插入一个托架并等至条形码照相机已返回原位及相应批已改变状态。 按同样方式插入剩余的托架。 在插入新托架之前，等候至相应批已改变状态。
Run cannot be started because an inventory scan has to be performed. 运行无法启动，因为必须进行一次库存扫描	Before the user can start a run, an inventory scan of each drawer except the “Sample” drawer must be performed. Open and close the drawers to start the inventory scan. If an inventory scan has already been performed, do not open the hood before starting the run. If the hood was opened after performing an inventory scan the scan has to be carried out again. 在用户启动一个运行前，必须对每个抽屉（除外“样本抽屉”）进行一次库存扫描。打开并关闭抽屉以启动库存扫描。 如果已完成库存扫描，在启动运行前不得打开防护罩。如果在执行库存扫描后打开了防护罩，则必须再次执行扫描。

### 13.6.6 Protocol errors 程序错误

Error 错误	Comments and suggestions 意见与建议
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Error 错误	Comments and suggestions 意见与建议
Assay Control Set is not displayed. 未显示检测对照集	<p>Make sure that the Assay Control Set was transferred to the QIASymphony SP. Check all categories in the <b>Assay Control Set</b> list.</p> <p>If a problem occurred during transfer of the Assay Control Set from the USB stick to the QIASymphony SP, see Sections 13.5.1 and 13.5.2. 确保检测对照集已移至 QIASymphony SP。检查“<b>检测对照集</b>”列表中的所有类目。</p> <p>如果在将检测对照集从 USB 盘移至 QIASymphony SP 时发生错误，请参阅章节 13.5.1 和 13.5.2。</p>

### 13.6.7 Errors that may occur while operating the QIASymphony SP 操作 QIASymphony SP 过程中可能发生的错误

Error 错误	Comments and suggestions 意见与建议
One or more channels had a Z-drive movement error. 一个或多个通道 Z-驱动移动错误	<p>Be sure to insert and to define the same tube/plate. Only use compatible tubes/racks. For more information, visit <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>.</p> <p>Make sure that the tubes/plates are properly inserted in the tube carrier/adaptor. Use an appropriately sized tube or rack for the volume.</p> <p>If filter-tips are still attached to the tip adapters, open the <b>Maintenance SP</b> menu and select <b>Cleanup</b> under <b>Cleanup</b>. Select the <b>Crash occurred</b> branch of the cleanup procedure.</p> <p>If the problem persists, contact QIAGEN Technical Services.</p> <p><b>Important:</b> After successful cleanup it is necessary to empty all slot positions in the “Sample” and “Eluate” drawers and restart the machine. New runs can then be started. 确保插入并定义同一试管/孔板。仅使用兼容的试管/架。了解更多信息，请访问 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>。</p> <p>确保试管/孔板正确插入到试管托架/适配器中。使用尺寸适合的试管或体积适合的架。</p> <p>如果带滤芯吸头仍连到吸头适配器，打开“<b>维护 SP</b>”菜单并选择“<b>清洁</b>”下的“<b>清洁</b>”。选择清洁操作的“<b>发生碰撞</b>”分支。</p> <p>如果问题持续存在，请联系 QIAGEN 技术服务部门。</p> <p><b>重要：</b>在成功清除后，有必要清空“<b>样本</b>”和“<b>洗脱</b>”抽屉中的所有槽方位，并重启机器。之后可启动新的运行。</p>
Sample is not detected by the system and is flagged as “invalid”. 系统未检测到样本，并被标记为“无效”	<p>Make sure the samples do not contain foam. Be sure to use at least the minimum volume of sample required for the protocol. For more information, refer to the handbook of the QIASymphony Kit you are using.</p> <p>If the problem persists, contact QIAGEN Technical Services. 确保样本不含泡沫。确保对于该程序使用至少所需最低的样本体积。更多信息请参考您正在使用的 QIASymphony 试剂盒手册。</p> <p>如果问题持续存在，请联系 QIAGEN 技术服务部门。</p>
Nothing happens when the <b>Cleanup</b> button in the <b>Maintenance SP</b> menu is pressed. 当点击“ <b>维护 SP</b> ”菜单中的“ <b>自动</b> ”按钮时无任何反应。	<p>Check that the hood and all drawers are closed. 检查防护罩和所有抽屉是否均已关闭。</p>
Lysis timer exceeded the time limit. 裂解计时器超过时限。	<p>The lysis time of the sample batch was exceeded. Do not pause the run during the lysis step.</p> <p><b>Note:</b> If another inventory scan of the “Eluate” drawer is performed after the run has started, this may result in the samples being flagged as “unclear”. 样本批的裂解时间超时。在裂解步骤过程中无法暂停运行。</p> <p><b>注意：</b>如果在运行已启动后执行“<b>洗脱物</b>”抽屉的另一次库存扫描，这可能导致处理的样本被标记为“<b>不定</b>”。</p>

### 13.6.8 Protocol interruption 程序中止

Error 错误	Comments and suggestions 意见与建议
System paused due to too few consumables in the "Reagents and Consumables" drawer. 系统因“试剂和耗材”抽屉中的耗材过少而暂停。	<p>Open the "Reagents and Consumables" drawer and add missing items. Close the drawer and perform an inventory scan.</p> <p><b>Note:</b> Samples will be flagged as "unclear".</p> <p><b>Note:</b> If one or more tip adapters cannot pick up filter-tips, contact QIAGEN Technical Services.</p> <p>打开“试剂和耗材”抽屉并添加缺失物品。关闭抽屉并执行库存扫描。</p> <p>注意：样本可能被标记为“不定”。</p> <p>注意：如果一个或多个吸头适配器无法提取带滤芯吸头，请联系 QIAGEN 技术服务部。</p>
Inventory scan of the "Eluate" drawer starts even though a batch is running. 即使批正在运行中仍对“洗脱物”抽屉启动了库存扫描。	<p>Each time the "Eluate" drawer is open and closed an inventory scan must be performed. During the scan the batch/run is paused, which leads to samples being flagged as "unclear". The batch continues when the inventory scan has finished. After a successful scan of the "Eluate" drawer, the user must press <b>Close</b> to continue.</p> <p><b>Note:</b> All drawers except the "Eluate" drawer are unlocked during an inventory scan of the "Eluate" drawer.</p> <p>此为正常步骤。每次“洗脱物”抽屉打开和关闭时，必须执行一次库存扫描。扫描过程中批/运行暂停，当库存扫描完成时继续。成功扫描“洗脱物”抽屉后，用户必须点击“关闭”继续。</p> <p>注意：在“洗脱物”抽屉库存扫描过程中，所有除外“洗脱物”抽屉的抽屉均处于解锁状态。</p>
The protocol was interrupted or stopped by the system due an error. 系统因错误中断或停止程序。	<p>The worktable must be cleaned up. Open the <b>Maintenance SP</b> menu and select <b>Cleanup</b> under <b>Cleanup</b>. Select the <b>Crash occurred</b> branch of the cleanup procedure. See Section 2.23.1 of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony SP</i>.</p> <p><b>Important:</b> After successful cleanup it is necessary to empty all slot positions in the "Sample" and "Eluate" drawers and restart the machine. New runs can then be started.</p> <p>必须清洗工作台。打开“维护 SP”菜单并选择“清洗”下的“自动”。选择清洗操作的“发生碰撞”分支。请参阅 <i>QIASymphony SP/AS 用户手册 - 操作 QIASymphony SP</i> 第 2.23.1 节。</p> <p>重要：在成功清洗后，有必要清空“样本”和“洗脱”抽屉中的所有槽位，并重启机器。之后可启动新的运行。</p>
The system stopped because an 8-Rod Cover or sample prep cartridge could not be released from the robotic gripper. 系统因 8 位磁棒套或样本制备卡夹无法从机械手夹持器释放而停止	<p>Do not initialize the QIASymphony SP/AS instruments.</p> <p>Switch off the QIASymphony SP/AS instruments and try to remove the 8-Rod Cover or sample prep cartridge from the QIASymphony SP manually. If it cannot be removed manually, contact QIAGEN Technical Services.</p> <p>不得初始化 QIASymphony SP/AS 仪器。</p> <p>关闭 QIASymphony SP/AS 仪器并尝试手动从 QIASymphony SP 卸除 8 位磁棒套或样本制备卡夹。</p> <p>如果无法手动卸除，请联系 QIAGEN 技术服务部。</p>

### 13.6.9 Inventory scan errors 库存扫描错误

Error 错误	Comments and suggestions 意见与建议
Unit box is not recognized during the inventory scan of the "Waste" drawer. 单元匣中的耗材未被识别	<p>Check that the lid of the unit box has been removed. If the error persists, try using another unit box.</p> <p>If this does not resolve the error, contact QIAGEN Technical Services.</p> <p>检查是否已去除了单元匣的盖子。放置单元匣到不同的槽内，并执行另一次库存扫描。</p> <p>如果这不能解决错误，请联系 QIAGEN 技术服务部。</p>

Error 错误	Comments and suggestions 意见与建议
Items in the "Waste" drawer are not detected. 未检测到“废弃物”抽屉内有物品。	<p>Make sure to perform an inventory scan of the "Waste" drawer after closing the drawer.</p> <p>Replace unit boxes and perform the inventory scan again.</p> <p>If the problem persists or occurs frequently, contact QIAGEN Technical Services.</p> <p>关闭抽屉之后，务必对“废弃物”抽屉进行一次库存扫描。</p>
Tip racks have been loaded but are not detected. 吸头架已被加载但未被检测到	<p>Make sure to load tip racks correctly.</p> <p>确保正确装载吸头架。</p>
Consumables in a unit box are not recognized. 单元匣中的耗材未被识别	<p>Check that the lid has been removed from the unit box. Place the unit box into a different slot and perform another inventory scan.</p> <p><b>Note:</b> Do not refill partially used unit boxes.</p> <p>If this does not resolve the error, contact QIAGEN Technical Services.</p> <p>检查是否已去除了单元匣的盖子。放置单元匣到不同的槽内，并执行另一次库存扫描。</p> <p>注意：请勿重装部分使用的吸头架。</p> <p>如果这不能解决错误，请联系 QIAGEN 技术服务部。</p>
One or more buffers were not recognized. 一个或多个缓冲剂未被识别	<p>Make sure that the Reuse Seal Strips have been removed from the troughs of the reagent cartridge.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>确保从试剂条料槽移去了可重复使用的密封条。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>
Buffer bottle was not detected. 缓冲液瓶未被检测到	<p>Check that the lid of the buffer bottle was removed.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>检查缓冲液瓶的盖子是否移除。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>
Accessory Trough was not detected. 未检测到辅料料槽。	<p>Only place Accessory Troughs into tip rack slots 5 and 12.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>放置配件料槽到吸头架槽 5 或 12 中。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>
Volume check of buffer bottle failed. 缓冲液瓶的体积检查失败	<p>Make sure that the bottle contains sufficient volume of buffer.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>确保瓶中含有充足体积的缓冲液。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>
Volume check of the Accessory Trough failed. 配件料槽的体积检查失败	<p>Make sure that the Accessory Trough contains sufficient volume of ethanol. For more information, refer to the handbook of the QIAsymphony Kit you are using.</p> <p>Perform another inventory scan of the "Reagents and Consumables" drawer.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>确保配件料槽中含有充足体积的乙醇。更多信息请参考您正在使用的 QIAsymphony 试剂盒手册。</p> <p>对“试剂和耗材”抽屉执行另一次库存扫描。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>
Reagent cartridge was not opened automatically by the system. 系统未自动打开试剂条	<p>If the inventory scan detects an unopened reagent cartridge, the reagent cartridge will be opened automatically before the first use in a protocol.</p> <p><b>Note:</b> Make sure that a piercing lid was attached to the reagent cartridge.</p> <p>如果库存扫描检测到未打开的试剂条，则程序运行中试剂条首次使用前将会被自动打开。</p> <p>注意：确保穿孔盖连至试剂条。</p>

Error 错误	Comments and suggestions 意见与建议
Inventory scan does not start. 库存扫描未启动	Close the hood and all drawers and make sure to press <b>Yes</b> in the message that appears. Check that the drawer is properly closed. Make sure that the instrument is switched on. 关闭防护罩和所有抽屉，并确保在出现的信息中点击“ <b>是</b> ”。 检查抽屉是否正确关闭。确保仪器打开。
Another inventory scan was requested by the user while an inventory scan was already running. 当库存扫描已在运行时用户请求了另一次库存扫描	The inventory scan has been queued and will be started as soon as the current inventory scan has finished. 库存扫描已排入排队并在当前库存扫描结束后即可启动。

## 13.7 QIASymphony AS errors that do not have error codes 无错误代码的 QIASymphony AS 错误

### 13.7.1 Assay definition errors 检测定义错误

Error 错误	Comments and suggestions 意见与建议
Wrong rack file content. 管架文件内容错误。	Ensure that the content of the selected rack file is correct. If the content is not correct, it can be modified using the touchscreen or the QIASymphony Management Console. 确保选中架文件的内容正确。 如果内容不正确，可通过触摸屏或 QIASymphony 管理控制台进行更改。
Wrong rack type. 管架类型错误	If possible, return to the <b>Sample Rack(s)</b> screen and change the rack type. If this is not possible, press <b>Cancel</b> and restart the assay definition process. If you are using a rack file, ensure that the correct rack file is selected. 如果可以，返回“ <b>样本管架</b> ”界面并更改管架类型。如果不行，点击“ <b>取消</b> ”并重启检测定义程序。 如果您正在使用架文件，确保选中了正确的架文件。
Wrong volume information for the eluate rack. 洗脱架体积信息错误	If the actual sample volume available is greater than the volume that was defined in the <b>Sample Rack Layout</b> screen, overflow may occur during aspiration. If the actual sample volume available is lower than the volume that was defined in the <b>Sample Rack Layout</b> screen, signals may be missing. 如果实际可用的样本体积大于“ <b>样本架布局</b> ”界面中所定义的体积，在吸取过程中可能会发生溢漏。 如果实际可用的样本体积小于“ <b>样本架布局</b> ”界面中所定义的体积，则信号可能缺失。
Sample cannot be assigned to an APS. 样本无法被分配到 APS	Samples with the status “invalid” cannot be processed on the QIASymphony AS and therefore cannot be selected during assay definition. Ensure that the sample you want to select is not “invalid”. 状态为“无效”的样本无法在 QIASymphony AS 上处理，因此在检测定义中也无法被选中。 确保您想选择的样本是非“无效的”。

Error 错误	Comments and suggestions 意见与建议
Assay list does not display expected Assay Parameter Set. 检测列表未显示期望的检测参数集	<p>Ensure that the required Assay Parameter Set(s) and Assay Definition files have been transferred to the QIASymphony SP/AS instruments before starting assay definition.</p> <p>Check all categories in the <b>Available assays</b> list for the expected Assay Parameter Sets.</p> <p>Check whether the expected Assay Parameter Set was configured for usage in Independent or Integrated mode.</p> <p>In <b>Assay Setup/Assay Selection</b> screen, if using a work list, switch between the <b>Assay list</b> and the <b>Work list</b> mode and check all categories in the <b>Available assays</b> list for the expected Assay Parameter Sets.</p> <p><b>Note:</b> This only applies in <b>Independent</b> mode.</p> <p>确保开始检测定义前已将工作列表中定义的检测参数集和检测定义文件移至 QIASymphony SP/AS 仪器。</p> <p>检查“<b>可用检测</b>”列表中的所有类目是否为期望的检测参数集。</p> <p>如果使用工作列表，在“<b>检测列表</b>”和“<b>工作列表</b>”之间切换，并检查“<b>可用检测</b>”列表中的所有类目是否为期望的检查参数集。</p>

### 13.7.2 Inventory scan errors 库存扫描错误

Error 错误	Comments and suggestions 意见与建议
The inventory scan of the drawers detects an adapter on “slot X” although no adapter has been placed there. 抽屉的库存扫描在“槽 X”上检测到适配器，即使该处未放置适配器	<p>Do not expose the QIASymphony SP/AS instruments to direct sunlight (see Section 4.2 of the <i>QIASymphony SP/AS User Manual — General Description</i>).</p> <p>Ensure that the bar codes on the drawer are clean and can be easily read.</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>不得将 QIASymphony SP/AS 仪器暴露在直射日光下（请参阅“QIASymphony SP/AS 用户手册 – 概述”第 4.2 节）。</p> <p>确保抽屉上的条形码清洁并可方便读取。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>
The bar code of an elution or assay rack cannot be read using the handheld bar code scanner. 使用手持式条形码扫描仪无法读取洗脱/检测架的条形码	<p>Make sure that the handheld bar code scanner is correctly connected to the QIASymphony SP/AS instruments. Try to read other bar codes with the scanner. Ensure that all bar codes can be easily read.</p> <p>Check that the bar code format can be read by the handheld bar code scanner. See Appendix A of the <i>QIASymphony SP/AS User Manual — General Description</i> for a list of compatible bar code types.</p> <p>Define the elution slot/elution rack using the touchscreen.</p> <p>确保手持式条形码扫描仪正确连至 QIASymphony SP/AS 仪器。尝试用扫描仪读取其他条形码。确保所有条形码均可方便读取。</p> <p>检查条形码格式是否可为手持式条形码扫描仪读取。</p> <p>查看“QIASymphony SP/AS 用户手册 – 概述”附录 A 了解兼容条形码类型的列表。</p> <p>通过触摸屏定义洗脱槽/洗脱架。</p>
Adapter bar code not readable. 无法读取适配器条形码。	<p>Do not expose the QIASymphony SP/AS instruments to direct sunlight (see Section 4.2 of the <i>QIASymphony SP/AS User Manual — General Description</i>).</p> <p>Ensure that the bar codes on the drawer are clean and can be easily read.</p> <p>请勿让 QIASymphony SP/AS 仪器暴露在直射阳光下（“QIASymphony SP/AS 用户手册 – 概述”第 4.2 节）。</p> <p>请确保抽屉上的条形码清晰、易读。</p>



Error 错误	Comments and suggestions 意见与建议
Run cannot be started because an inventory scan must be performed. 由于必须要进行库存扫描，故运行无法启动。	Before an assay run can be started an inventory scan of each drawer must be successfully performed. Open and then close each drawer to start the inventory scan. If an inventory scan has already been performed, do not open the hood before starting the assay run. If the hood was opened after performing an inventory scan, the inventory scan must be performed again. 检测运行启动前，必须针对各个抽屉进行一次成功的库存扫描。先后打开和关闭各个抽屉，开始库存扫描。 如果已经进行库存扫描，在启动检测运行前请勿打开防护罩，如果在库存扫描后打开防护罩，则必须再次进行库存扫描。
Tip chute not detected. 未检测到吸头槽。	Ensure that the tip chute is correctly installed on the QIASymphony AS. Do not expose the QIASymphony SP/AS instruments to direct sunlight (see Section 4.2 of the QIASymphony SP/AS User Manual — General Description). 请确保吸头槽已正确安装在 QIASymphony AS 上。 请勿让 QIASymphony SP/AS 仪器暴露在直射阳光下（参见“QIASymphony SP/AS 用户手册 – 概述”第 4.2 节）。
Tip racks have been loaded but are not detected. 已正确加载吸头架却无法检测到。	Ensure that tip racks are correctly loaded. We recommend only loading full tip racks. 确保吸头架已正确加载。 我们建议仅加载满的吸头架。
Inventory scan does not start. 库存扫描不启动。	Ensure that the hood and all drawers are properly closed. Press <b>Yes</b> in the message that appears. 确认防护罩和所有抽屉均已关闭。点击出现的提示消息内的“是”。
Another inventory scan was requested by the user while an inventory scan was already running. 正在运行库存扫描时，用户请求进行下一次库存扫描。	The inventory scan was queued and will be started as soon as the current inventory scan is complete. 库存扫描正在排队，目前的库存扫描完成后即会启动下一次库存扫描。

### 13.7.3 Errors occurring during an assay run 检测运行过程中发生错误

#### **Problems with labware or with liquid spills** **器具或液体泄漏问题**

Error 错误	Comments and suggestions 意见与建议
Wrong reagent tube placed in adapter. 适配器内放置的试剂试管有误。	Problems with tip positioning could occur. This may result in pipetting of incorrect volumes and problems during the assay run and data analysis. In addition, the tip might crash into the tube/plate and result in damage to the QIASymphony AS. 可能出现了吸头定位问题。这可能会造成移液体积出错，同时在检测运行和数据分析时出现问题。除此之外，

Error 错误	Comments and suggestions 意见与建议
Positioning in xy direction changes. xy 方向定位切换。	<p>Ensure that the workbench that the QIASymphony SP/AS instruments are placed on meets the requirements (see Section 4.2 of the <i>QIASymphony SP/AS User Manual — General Description</i>). We recommend using the QIASymphony Cabinet SP/AS for correct positioning of the QIASymphony SP/AS instruments.</p> <p>Ensure that the drawers are properly closed.</p> <p>确保放置 QIASymphony SP/AS 仪器的工作台符合要求（“QIASymphony SP/AS 用户手册 - 概述”第 4.2 节）。</p> <p>我们建议使用 QIASymphony 柜式 SP/AS 来放置 QIASymphony SP/AS 仪器。</p> <p>确保抽屉均已妥善关闭。</p>
Liquids in adapter. 适配器内存在液体。	<p>Ensure that all consumables are placed in the correct positions on the worktable. The inventory scan does not check whether the correct tubes/plates are placed in the corresponding adapters.</p> <p>确保所有耗材均放置在工作台上的正确位置。库存扫描无法检查是否将正确的试管/反应板放在相应的适配器上。</p>
Condensation on the worktable. 工作台上存在凝结水。	<p>Depending on the environment in the laboratory, it is possible that condensation forms on the worktable. Wipe away condensation according to the daily maintenance procedures, see Section 9.2 of the <i>QIASymphony SP/AS User Manual — General Description</i>.</p> <p>根据具体的实验室环境，可能会在工作台上形成凝结水珠。请根据日常的维护程序擦去凝结水，具体请参阅“QIASymphony SP/AS 用户手册 - 概述”第 9.2 节。</p>
Filter-tips are bent or deformed after liquid transfer. 移液后，带滤芯的吸头折弯或变形。	<p>Ensure that the correct rack type is defined on the correct slot.</p> <p>Ensure that the rack is correctly positioned on the adapter.</p> <p>Only use rack types that are compatible with the defined adapter.</p> <p>确保已在正确的插槽上指定了正确的管架类型。</p> <p>确保管架已正确放置在适配器上。</p> <p>仅可使用与指定的适配器兼容的管架类型。</p>

## Assay run interruption

### 检测运行中断

Error 错误	Comments and suggestions 意见与建议
Inventory status during run not correct. 运行过程中的库存状态不正确	<p>Ensure that an inventory scan is performed on each drawer if something on the worktable has been changed.</p> <p>如果工作台上的某物已作更换，确保对每个抽屉进行一次库存扫描。</p>
The protocol was interrupted or stopped by the system due to an error. 系统因错误中断或停止程序	<p>Remove consumables from the worktable. If necessary, see Section 2.13 of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i> for details about protocol recovery and manually completing assay setup.</p> <p>The length of time that a protocol can be stopped/interrupted may be defined in some protocols. Any stop, pause, or interruption of a protocol will lead to samples being flagged as “unclear”.</p> <p>从工作台移除耗材。如有必要，请参阅 <i>QIASymphony SP/AS 用户手册 - QIASymphony AS 操作手册</i> 的第 2.13 节获取有关恢复程序和手动完成检测创建的细节。</p> <p>某些程序中，可定义程序可被停止/中断的时长。如果超出此时间，样本可能被标示为“不定”。</p>
Missing tips. 缺失吸头	<p>If insufficient tips are available, reload tips onto the worktable.</p> <p>If sufficient tips are available and the error persists, change the tip rack position. It is possible that the pipetting head cannot reach the tips.</p> <p>如果无充足吸头可用，则重新装载吸头到工作台。</p> <p>如果无充足吸头可用并且错误持续存在，请更改吸头架位置。可能情况是移液头无法到达吸头。</p>

Error 错误	Comments and suggestions 意见与建议
Not enough liquid found. 无足够液体可用。	<p>Ensure that the correct volume is provided and that the plates/tubes and adapters as defined in the assay definition are provided.</p> <p>Ensure that there are no air bubbles on the surface of the liquid.</p> <p>Add more liquid. 确保提供正确的体积，并且提供检测定义中定义的孔板/试管和适配器。</p> <p>确保液体表面无气泡。</p> <p>添加更多液体。</p>

### 13.7.4 Data analysis errors 数据分析错误

#### *Missing or wrong signal for assay standards and assay controls (e.g., internal control)* **检测标准品和检测对照（如，内参）信号缺失或错误**

Error 错误	Comments and suggestions 意见与建议
Wrong reagent tube placed in adapter. 适配器上放置了错误的试剂试管	<p>If the shape of a tube differs slightly from the required tube type, problems during aspiration may occur. For instance, a lower volume than expected may be transferred.</p> <p>如果试管外形稍不同于要求的试管类型，则在吸取过程中可能会发生错误。例如，移液量少于期望的量。</p>
No tube placed in a position on the reagent holder. 在试剂基座的位置无试管放置	<p>If the requested volume is above the liquid-level detection limit, a "not-enough-liquid" message will appear.</p> <p>If the requested volume is below the liquid-level detection limit, the QIASymphony AS will not recognize a missing tube or the liquid level and will continue with the assay run.</p> <p>如果要求的体积在液位检测限以上，将会出现“液体不足”的信息。</p> <p>如果要求的体积在液位检测限以下，QIASymphony AS 将无法识别缺失的试管或液位，并将继续检测运行。</p>
Frozen liquids or closed tubes. 冷冻液体或关闭试管	<p>Ensure that the lids were removed from all tubes and that the liquids are completely thawed.</p> <p>确保已移除了所有试管的盖子及已完全解冻液体。</p>
Mix-up of reagent and assay standard tubes. 混匀试剂和检测标准品试管	<p>If the volume is lower than expected, a message will appear indicating that there is not enough liquid available. Ensure that the reagent and assay standard tubes are correctly positioned.</p> <p>If the volume is higher than expected, or is below the liquid-level detection limit, the assay run will continue which may result in missing signals.</p> <p>如果体积低于期望值，将会弹出消息提示无充足液体可用。确保正确放置试剂和检测标准品试管。</p> <p>如果体积超过期望值，或低于液位检测限，检测运行将继续，这可能导致信号丢失。</p>
Air bubbles or foam enclosed by liquid. 由液体形成的气泡或泡沫	<p>Air was aspirated, perhaps due to bubbles on the surface of the liquid. This may result in missing signals.</p> <p>Always ensure that there are no bubbles on the liquid surface. To remove bubbles, centrifuge the tubes.</p> <p>吸入空气可能是由于液体表面有气泡。这可能导致信号丢失。</p> <p>始终确保液体表面无泡沫。离心试管移去气泡。</p>

**Missing**  
**丢失样本信号**

**sample**

**signal**

Error 错误	Comments and suggestions 意见与建议
Evaporation. 蒸发。	<p>If eluates/assays are left to stand on the QIASymphony SP/AS instruments for a long time after a run is complete, evaporation will occur.</p> <p>Ensure that eluate racks and assay racks are removed immediately when a run is completed. 如果洗脱物/检测物在运行完成后一段时间静置在 QIASymphony SP/AS 仪器上，则将发生蒸发。</p> <p>确保在运行结束后即刻移除洗脱架和检测架。</p>
Wrong volume information. 错误体积信息。	<p>The eluate volume as defined in the rack file or on the touchscreen is higher than the actual eluate volume.</p> <p>The QIASymphony SP/AS instruments may not be able to transfer the correct sample volumes. This may result in reduced performance. 架文件中或触摸屏上定义的洗脱体积高于实际洗脱体积。</p> <p>QIASymphony SP/AS 仪器可能无法转移正确的样本体积。这可能降低性能。</p>
Fluctuations in eluate volumes. 洗脱体积不同。	<p>We recommend inspecting the assay rack visually to check for differences in sample volumes. Large differences in volume indicate that the actual eluate volume differs from the expected volume and that insufficient eluate was transferred to the assay rack.</p> <p>If problems persist, reduce the eluate volume. 我们建议通过肉眼观察检测架以检查样本体积是否不同。体积差异大表示实际洗脱体积不同于期望的体积，及移至检测架的洗脱物不充足。</p> <p>如果问题持续存在，则减少洗脱体积。</p>
Wrong rack type selected for eluate or assay rack. 洗脱物或检测架的架类型选择错误。	<p>Ensure the correct adapters and consumables, as defined for the current run, are loaded on to the worktable.</p> <p>Use of different consumables may result in damage to the QIASymphony SP/AS instruments and may cause pipetting problems. 如当前运行所定义，确保正确的适配器和耗材装载到工作台。</p> <p>使用不同的耗材可能导致 QIASymphony SP/AS 仪器损坏闭关可导致移液问题。</p>
Reactions are not in the corresponding position on the assay rack. 反应物不在检测架上的相应位置。	<p>Ensure that the assay rack and the elution rack are set up with well A1 in the upper left corner.</p> <p>If 2 elution racks are in use, ensure that the elution racks on slot 1 and 2 are correctly placed. 确保装配检测架和洗脱架时孔 A1 位于左上角。</p> <p>如果正在使用 2 个洗脱架，确保槽 1 和 2 上的洗脱架正确放置。</p>
Tips/channels are incorrectly positioned on the elution slot during the elution step. 吸头/通道在洗脱步骤中未正确放置在洗脱槽上	<p>Ensure that the elution rack is placed on the elution slot in the correct orientation.</p> <p>Ensure that the correct sample tubes are loaded, as defined in the run. Only use sample tubes/racks that are compatible with the QIASymphony SP/AS instruments. For a full list of compatible sample tubes/racks, visit <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>.</p> <p>If the error persists, contact QIAGEN Technical Services. 确保洗脱架以正确位姿放置在洗脱槽上。</p> <p>确保装载了运行所定义的正确样本。仅可使用与 QIASymphony SP/AS 仪器相兼容的样本试管/架。要查看兼容样本试管/架的完整清单，请访问 <a href="http://www.qiagen.com/goto/QIASymphony">www.qiagen.com/goto/QIASymphony</a>。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>

## 13.8 Integrated run errors that do not have error codes 无错误代码的集成运行错误

### 13.8.1 “Eluate” drawer “洗脱物”抽屉

Error 错误	Comments and suggestions 意见与建议
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Error 错误	Comments and suggestions 意见与建议
The "Eluate" drawer cannot be opened. “洗脱物”抽屉无法打开。	<p>The "Eluate" drawer is locked as soon as "Define Run" button in the "Integrated Run/Overview" is selected (see Section 2.4, "Defining an integrated run", of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i>).</p> <p>It is only possible to open the "Eluate" drawer if no integrated batch is loaded or queued in the "Integrated Run/Overview" screen. To open the "Eluate" drawer, remove "Integrated Batch(es)" in the "Integrated Run/Overview" (see Section 2.16.1, "Unloading the worktable", of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i>).</p> <p>选定“集成运行/概览”之中的“定义运行”按钮后，“洗脱物”抽屉即处于锁定状态。（参见 <i>QIASymphony SP/AS 用户手册·QIASymphony AS 操作手册</i>）。</p> <p>如果“集成运行/概览”之中无集成批次加载或排队，则仅可打开“洗脱物”抽屉。如要打开“洗脱物”抽屉，可移除“集成运行/概览”之中的“集成批次”。参见 <i>QIASymphony SP/AS 用户手册·QIASymphony AS 操作手册第 2.16.1 节</i>）。</p>

### 13.8.2 Removal of an integrated run 移除运行的批次

Error 错误	Comments and suggestions 意见与建议
Integrated batch cannot be removed in the "Integrated Run" Overview. 无法从“集成运行/概览”中移除集成批次。	<p>To remove an Integrated run which cannot be removed in the "Integrated run/Overview", the Assay Setup has to be manually booked out from the system (e.g., if sample preparation has finished and the AS batch cannot be started due to a previously stopped AS batch).</p> <p>To manually book out the AS batch from the integrated run, remove the AS batch by selecting the "Assay Setup" tab and press "Remove" in the "Overview" screen (see Section 2.9, "Removing assays after an AS run", of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i>). After removing the AS batch, return to the "Integrated Run/Overview" and remove the Integrated run by pressing the "Integrated Batch X" button (see Section 2.16.1, "Unloading the worktable", of the <i>QIASymphony SP/AS User Manual — Operating the QIASymphony AS</i>).</p> <p>If the error persists, contact QIAGEN Technical Services.</p> <p>如要移除无法从“集成运行/概览”中移除的集成运行，必须手动从系统中注销“检测构建”（例如，如果样本制备已完成，但 AS 批次由于之前的 AS 批次停止而无法启动）。</p> <p>如要从集成运行中手动注销 AS 批次，可选择“检测构建”标签移除 AS 批次，然后在“概览”界面点击“移除”（参见 <i>QIASymphony SP/AS 用户手册—QIASymphony AS 操作第 2.9 节“AS 运行后移除检测”部分</i>）。移除 AS 批次之后，返回“集成运行/概览”，点击“集成批次 X”按钮移除集成运行（<i>QIASymphony SP/AS 用户手册—QIASymphony AS 操作第 2.9 节“AS 运行后移除检测”部分 QIASymphony SP/AS 用户手册—QIASymphony AS 操作第 2.16.1 节“卸除工作台”部分</i>）。</p> <p>如果错误持续存在，请联系 QIAGEN 技术服务部。</p>

### 13.8.3 Maintenance, service, and configuration 维护、服务及配置

Error 错误	Comments and suggestions 意见与建议
Maintenance is not accessible. 无法访问“维护”菜单。	Remove loaded Integrated batches to access the Maintenance menu. 如需访问“维护”菜单，请先移除加载的集成批次。
Service is not accessible. 无法访问“服务”菜单。	Remove loaded Integrated batches to access the service menu. 如需访问“服务”菜单，请先移除加载的集成批次。

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Error 错误	Comments and suggestions 意见与建议
Configuration is not accessible. 无法访问“配置”菜单。	Remove eluate plate and scan the empty eluate drawer. 移除洗脱板，然后扫描空的洗脱抽屉。

## 14 Maintenance

### 维护

The table below describes the personnel required to carry out the maintenance to ensure optimal performance of your QIASymphony SP/AS instruments. 下表描述了为确保您的 QIASymphony SP/AS 仪器维持最佳性能，而需要执行维护任务的人员要求。

Type of task) 任务类型	Frequency 频次	Personnel 人员
Regular maintenance 常规维护	At the end of each run 每次运行结束时	Laboratory technicians or equivalent 实验室技术员或同等人员
Daily maintenance 每日维护	At the end of each day, after the regular maintenance 每天结束时，常规维护后	Laboratory technicians or equivalent 实验室技术员或同等人员
Weekly maintenance 每周维护	Once per week, after the regular and daily maintenance 每周一次，常规和每日维护后	Laboratory technicians or equivalent 实验室技术员或同等人员
Annual preventive maintenance and servicing 年度预防性维护和保修	Once per year 每年一次	QIAGEN Field Service Specialists only 仅 QIAGEN 技术支持专员

<b>Important 重要</b>	<p>The safety information must be read thoroughly and understood before starting maintenance and servicing work.</p> <p>Pay special attention to Section 2.9.</p> <p>开展维护和保修作业前，必须透彻地阅读并理解安全信息。</p> <p>尤其应该注意第 2.9. 节的内容。</p>
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### 14.1 Cleaning

#### 清洁

<b>Important 重要</b>	<p>If liquid is spilled on the QIASymphony SP/AS worktables, wipe it away as soon as the run has finished in accordance with the required safety regulations. Do not allow the liquid to dry.</p> <p>如果有液体溅洒在 QIASymphony SP/AS 工作台上，请在运行完成后，立即依照必需的安全规范擦去。请勿让液体自行晾干。</p>
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#### 14.1.1.1 Cleaning agents

##### 清洁剂

##### *Disinfectants and detergents for cleaning*

##### **清洁用消毒剂 and 除垢剂**

Mikrozid® Liquid (Schülke & Mayr GmbH; [www.schuelke-mayr.com](http://www.schuelke-mayr.com)) — ethanol-based disinfectant for spraying onto items that have been removed from the QIASymphony SP/AS worktables

Mikrozid®.Liquid (Schülke&MayrGmbH;[www.schuelke-mayr.com](http://www.schuelke-mayr.com)) — 含乙醇消毒剂，用于喷洒从 QIASymphony SP/AS 工作台卸除的物品

Mikrozid Wipes (Schülke & Mayr GmbH; [www.schuelke-mayr.com](http://www.schuelke-mayr.com)) — moistened with ethanol-based disinfectant for wiping surfaces of the QIASymphony SP/AS

Mikrozid 擦拭巾 ( Schülke&MayrGmbH;[www.schuelke-mayr.com](http://www.schuelke-mayr.com) ) — 用含乙醇消毒剂浸湿，用于擦拭 QIASymphony SP/AS 仪器的台面

Mikrozid Sensitive Liquid (Schülke & Mayr GmbH; [www.schuelke-mayr.com](http://www.schuelke-mayr.com)) — quaternary ammonium salt based disinfectant. Consists of 0.26 g quaternary ammonium compounds, benzyl-C12-C16-alkyldimethyl, chlorides; 0.26 g Didecyldimethylammonium chloride and 0.26 g quaternary ammonium compounds, benzyl-C12-C14-alkyl[(ethylphenyl)methyl]dimethyl, chlorides per 100 g Mikrozid Sensitive Liquid). For alcohol-sensitive surfaces.

Mikrozid 敏液 ( Schülke&MayrGmbH;[www.schuelke-mayr.com](http://www.schuelke-mayr.com) ) — 用于酒精敏感台面的含季铵盐消毒剂 (每 100g Mikrozid 敏液包括 0.26g 季胺类化合物，苄基-C12-C16-烷基二甲基，氯化物；0.26g 二癸基二甲基氯化铵和 0.26g 季胺类化合物，苄基-C12-C14-烷基[(苯乙基)甲基]二甲基,氯化物)

##### **Removal of RNase contamination**

##### **去除 RNA 酶污染物**

5 PRIME RNaseKiller (5 PRIME, cat. no 2500080) — for cleaning surfaces and submerging worktable items

5 PRIME RNaseKiller ( 5 PRIME ，目录号 2500080 ) —用于清洁表面和浸润工作台物品

0.1 M NaOH — as an alternative to 5 PRIME RNaseKiller for cleaning surfaces and submerging worktable items.

0.1 M NaOH—作为 5 PRIME RNaseKiller 的替代品，用于清洁表面和浸润工作台物品。

##### **Removal of nucleic acid contamination (DNA and RNA)**

##### **去除核酸污染物 (DNA 和 RNA)**

DNA-ExitusPlus™ IF (AppliChem, cat. no. A7409,0100; indicator-free variant of DNA-ExitusPlus) — for cleaning surfaces and submerging worktable items.



DNA-ExitusPlus™(AppliChem , 目录号 A7089,0100) — 用于清洁表面和浸润工作台物品。

<b>Important 重要</b>	<p>Do not use alcohol or alcohol-based disinfectants to clean the QIASymphony SP/AS hoods or side panels. Exposure of the QIASymphony SP/AS hoods and side panels to alcohol or alcohol-based disinfectants will cause surface cracking. Clean the QIASymphony SP/AS hoods and side panels with distilled water or Mikrozyd Sensitive Liquid only.</p> <p>重要：不得使用酒精或含酒精的消毒剂清洁 QIASymphony SP/AS 防护罩或侧面板。QIASymphony SP/AS 防护罩和侧面板暴露于酒精或含酒精的消毒剂将引起表面裂纹。只能用蒸馏水或 Mikrozyd 敏液清洁 QIASymphony SP/AS 防护罩和侧面板。</p>
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### Europe

#### 欧洲

Gigasept® Instru AF (Schülke & Mayr GmbH; [www.schuelke-mayr.com](http://www.schuelke-mayr.com)) — Consists of 14 g cocospropylene-diamine-guanidine diacetate, 35 g phenoxypropanols, and 2.5 g benzalkonium chloride per 100 g Gigasept Instru AF , with anticorrosion components, fragrance, and 15–30% nonionic surfactants. Disinfectant for submerging worktable items.

Lysetol® AF (Gigasept® InstruAF)(Schülke & Mayr GmbH; [www.schuelke-mayr.com](http://www.schuelke-mayr.com)) —用于浸润工作台物品的消毒剂（每 100g Lysetol AF 包括 14g cocospropylene-二氨-胍双乙酸盐，35g 苯氧基丙醇类，及 2.5g 苯扎氯铵氯化物，并含有抗腐蚀剂组分、芳香剂及 15 – 30%非离子表面活性剂）。

### USA

#### 美国

DECON-QUAT® 100 (Veltek Associates, Inc.; [www.sterile.com](http://www.sterile.com)) — quaternary ammonium salt based disinfectant concentrate. Contains 5% alkyldimethylbenzylammonium chloride and 5% alkyldimethylethylbenzylammonium chloride). For submerging worktable items.

DECON-QUAT® 100 (Veltek Associates, Inc.; [www.sterile.com](http://www.sterile.com)) — 含消毒剂浓缩剂的季铵盐，用于浸润工作台物品（包含 5%烷基二甲基苄基氯化铵和 5%烷基二甲基乙基苄基氯化铵）。


<b>Important 重要</b>	<p>If you want to use disinfectants different from those recommended, ensure that their compositions are similar to those described above. A suitable alternative to Mikrozyd Liquid is Incidin® Liquid (Ecolab; <a href="http://www.ecolab.com">www.ecolab.com</a>).</p>
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	如果你想使用与那些非推荐的消毒剂，请确保它们的组分与上述消毒剂类似。Mikrozid 液的一个合适替代品是 Incidin 液 (EcoLab ; www.ecolab.com)。
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<b>Important</b> <b>重要</b>	If solvents or saline, acidic, or alkaline solutions are spilled on QIASymphony SP/AS instruments, wipe them away immediately. 如果溶剂或盐水、酸或碱性溶液溅洒在 QIASymphony SP/AS 仪器上，请立即擦去它们。
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<b>Important</b> <b>重要</b>	Do not use alcohol or alcohol-based reagents to clean the QIASymphony hood(s) or side-panels. 决不可用酒精或含酒精的溶液清洁仪器防护罩或侧面板。
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<b>Important</b> <b>重要提示</b>	Contact the instrument supplier if there are questions regarding the use of cleaning agents. 如果存在有关使用清洁剂的问题，请联系仪器供应商。
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<b>CAUTION</b> <b>注意</b> 	<b>Damage to the instrument(s)</b> <b>仪器损坏</b> After wiping the drawers and lysis station with paper towels, make sure that no bits of paper towel remain. Pieces of paper towel remaining on the worktable could lead to a worktable collision. 用纸巾擦拭抽屉和裂解台后，确保无纸巾碎屑残留。纸巾碎屑残留在工作台可导致工作台碰撞。
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## 14.2 Servicing 维修

Contact your QIAGEN Field Service representative or your local distributor for more information about flexible Service Support Agreements from QIAGEN. 请联系您的 QIAGEN 技术服务支持或您的地方分销商获取有关 QIAGEN 灵活服务支持协定的信息。

<b>Important</b> <b>重要</b>	Disconnect the line power cord from the power outlet before servicing. 在维修前请从电源插座断开电源线。
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### 14.3 Regular maintenance 常规维护操作

Regular maintenance is required after each run on the QIASymphony SP/AS. A separate maintenance routine should be performed for the QIASymphony SP and QIASymphony AS.

在 QIASymphony SP/AS 上每次运行后均要求进行常规维护。应当对 QIASymphony SP 和 QIASymphony AS 进行一次单独的例行维护。

<b>Important</b> <b>重要</b>	Before running a service protocol from the <b>Maintenance SP</b> or <b>Maintenance AS</b> menu, ensure that the QIASymphony SP/AS hoods are closed. 在从“ <b>维护 SP</b> ”或“ <b>维护 AS</b> ”运行维修程序时，请确保 QIASymphony SP/AS 防护盖处于关闭状态。
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#### 14.3.1 Regular disposal of tips 吸头常规报废方法

<b>Important</b> <b>重要</b>	To avoid contamination, the tip disposal bag must be emptied before starting the next run. 为防止污染，在启动下一检测运行前，请清空吸头处理袋。
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<b>Important</b> <b>重要</b>	Residual liquid from the tip disposal chute may drip. 吸头处置槽中的残留液体可能会滴漏。
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<b>Important</b> <b>重要</b>	Pay attention to the safety information. 请格外注意安全信息。
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<b>Important</b> <b>重要</b>	When using the QIASymphony Cabinet SP/AS, the waste bin should be emptied to avoid contamination inside the cabinet. 使用 QIASymphony 柜式 SP/AS 时，为防止柜内存在污染，应当清空废弃物容器。
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<b>Important</b> <b>重要</b>	Check the waste bin regularly. 请定期检查废弃物容器。
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<b>Important</b> <b>重要</b>	Residual liquid from the tip disposal chute may drip inside the cabinet. 吸头处置槽中的残留液体可能会滴漏在柜内。
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For detailed information, refer to the *QIASymphony Cabinet SP/AS User Guide*.

详细信息请参阅 QIASymphony 柜式 SP/AS 用户指南。

### 14.3.2 Regular maintenance procedure for the QIASymphony SP QIASymphony SP 的常规维护操作

1. Remove and safely store eluates from the “Eluate” drawer. As an optional step, download the result file(s) and ensure that the files have been backed up.  
从“洗脱物”抽屉卸除并安全保存洗脱物。也可选择下载结果文件并确保这些文件已得到备份。
2. Remove used sample tubes/plates from the “Sample” drawer and discard according to your local safety regulations.  
从“样本”抽屉卸除用户样本试管/孔板，并依照您当地的安全性法规予以弃置。
3. Remove reagent cartridges from the “Reagents and Consumables” drawer. Seal partially used reagent cartridges and store according to the instructions in the handbook of the QIASymphony Kit you are using. Discard used reagent cartridges according to your local safety and environmental regulations.  
从“试剂和耗材”抽屉卸除试剂条。根据您正在使用的 QIASymphony 试剂盒手册中的描述保存部分密封使用过的试剂条进行保存。遵照您当地的安全法规弃置用过的试剂条。
4. Replace the tip disposal or waste bin bag if it is full.  
替换吸头处理袋或废弃物袋（如果已满）。
5. Close unit boxes filled with waste plasticware and discard according to your local safety regulations.  
关闭装满废塑料器具的单元匣并根据您当地的安全性法规予以弃置。
6. Check the magnetic-head guards.  
检查磁头防护装置。

<b>Important</b> <b>重要</b>	When using the QIASymphony Cabinet SP/AS, the waste bin should be emptied to avoid contamination inside the cabinet. 使用 QIASymphony 柜式 SP/AS 时，为防止柜内存在污染，应当清空废弃物容器。
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For detailed information, refer to the *QIASymphony Cabinet SP/AS User Manual*.

详细信息请参阅 QIASymphony 柜式 SP/AS 用户手册。

If required, clean the magnetic-head guards before starting the next protocol run. Proceed as follows:

如果需要，在开始下一程序运行前请进行清洁磁头防护装置。请按如下步骤操作：

1. Open the **Maintenance SP** menu and run the service protocol **Magnetic head guards**. Gently raise the catches to release the magnetic-head guards.  
打开“**维护 SP**”菜单并运行服务程序“**磁头防护装置**”。轻轻抬起捕获物释放磁头防护装置。
2. Wipe the magnetic-head guards with ethanol-based disinfectant (e.g., Mikrozid), and incubate as appropriate.  
用含乙醇的消毒剂（如 Mikrozid）擦拭磁头防护装置，并适当孵育。
3. Wipe with a lint-free cloth moistened with water and wipe dry with paper towels. Replace the magnetic-head guards.  
用蘸水的无绒布擦拭，并用纸巾擦拭干。重新装饰磁头防护装置。
4. Open the **Maintenance SP** menu and run the service protocol **Open magnetic head guards**.  
打开“**维护 SP**”菜单并运行维修程序“**打开磁头防护装置**”。

<b>CAUTION</b> <b>注意</b> 	<b>Damage to the instrument(s)</b> <b>仪器损坏</b> Make sure to install the magnetic-head guards before operating the QIASymphony SP. 确保在操作 QIASymphony SP 仪器前安装磁头防护装置。
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#### 14.3.3 Regular maintenance procedure for the QIASymphony AS QIASymphony AS 的常规维护操作

1. Remove the assay run by pressing the **Remove** button.  
点击“**卸除**”按钮，卸除检测运行。
2. Remove assays from the “Assays” drawer. If desired, transfer assays directly to the PCR cycler.  
从“**检测**”抽屉卸除检测物。如果需要，可直接转移检测物至 PCR 仪。
3. **Optional:** Download the result file and, if available, the cycler file. Ensure that these files have been backed up.  
可选：下载结果文件及扩增文件（如果可以）。请确保这些已作了备份。
4. Remove used sample tubes/plates from the “Eluate and Reagents” drawer. Either store safely or discard according to your local safety regulations.

从“洗脱物和试剂”抽屉卸除用过的样本试管/孔板。根据您当地的安全性法规，可安全储存或予以弃置。

5. Remove reagent tubes and bottles from the “Eluate and Reagents” drawer and discard according to your local safety regulations.

从“洗脱物和试剂”抽屉卸除试剂试管和瓶，并依照您当地的安全性法规予以弃置。

6. Discard empty tip racks.

弃置空吸头架。

7. Replace the tip disposal bag before starting the next assay run.

在启动下一检测运行前，请替换吸头处理袋。

8. Perform UV decontamination of the worktable (optional).

对工作台执行紫外消毒（可选）。

<b>Important</b> <b>重要</b>	Do not refill used tip racks. 请勿重装用过的吸头架。
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<b>Important</b> <b>重要</b>	When using the QIASymphony Cabinet AS, check if the tip disposal bag is full. The waste bin should be emptied to avoid contamination inside the cabinet. 使用 QIASymphony 柜式 AS 时，请检查吸头处理袋是否装满。废弃物容器应当予以清空，以避免柜内存在污染。
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For detailed information, refer to the *QIASymphony Cabinet SP/AS User Guide*.  
详细信息请参阅 *QIASymphony 柜式 SP/AS 用户指南*。

## 14.4 Daily maintenance (SP/AS) 每日维护步骤

After performing the last run of the day, perform the regular maintenance procedure and, in addition, the daily maintenance procedure.

当天末次运行后，请执行常规维护操作及下文描述的每日维护步骤。


<b>Important</b> <b>重要</b>	Before running a service protocol from the <b>Maintenance</b> menu, ensure that the QIASymphony SP/AS hoods are closed. 在运行“维护”菜单的维修程序前，请确保 QIASymphony SP/AS 防护盖处于关闭状态。
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<b>Important</b> <b>重要</b>	Pay attention to the safety information. 请注意安全信息。
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#### 14.4.1 Pipetting system tip guards (SP/AS)

##### 移液系统吸头防护装置

1. Open the **Tools** screen and press **Maintenance SP** or **Maintenance AS**.  
打开“**工具**”界面并点击“**维护 SP**”或“**维护 AS**”。
2. Move the robotic arm to the cleaning position by pressing **Tip guards**.  
通过点击“**吸头防护装置**”将机械臂移至清洁位。
3. Remove all 4 tip guards by pushing each tip guard upward until it clicks out of place and can be removed.  
通过将每个吸头防护装置下推至恰好脱位并可卸除时，卸除所有 4 个吸头防护装置。
4. Soak in a glyoxal and quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) for at least 15 min.  
浸于乙二醛和含季铵盐的消毒剂（如 Lysetol AF）中至少 15 分钟。
5. Rinse with water and wipe dry with paper towels.  
用水清洗并用纸巾拭干。

<b>CAUTION</b> <b>注意</b> 	<b>Damage to the instrument(s)</b> <b>仪器损坏</b> Make sure to install the tip guards correctly before operating QIASymphony SP/AS instruments. 确保在操作 QIASymphony SP/AS 仪器前安装吸头防护装置。
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#### 14.4.2 Tip disposal chute

##### 吸头处置槽

<b>Important</b> <b>重要</b>	If using the QIASymphony Cabinet SP/AS, refer to the instructions provided in the “Maintenance” section of the <i>QIASymphony Cabinet SP/AS User Guide</i> . 如果使用 QIASymphony 柜式 SP/AS，请参阅 QIASymphony 柜式 SP/AS 用户指南“维护”部分的说明。
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##### **QIASymphony SP**

1. Remove the tip disposal chute from the “Waste” drawer.  
从“废弃物”抽屉卸除废液容器。
2. Soak in a glyoxal and quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) for at least 15 min.  
浸于乙二醛和含季铵盐的消毒剂（如 Lysetol AF）中至少 15 分钟。
3. Rinse with water and wipe dry with paper towels. 用水清洗并用纸巾拭干。

##### **QIASymphony AS**

1. Open the **Tools** screen and press **Maintenance AS**.  
打开“**工具**”界面并点击“**维护 AS**”。
2. Press **Robotic arm left** to move the robotic arm to the left.  
点击“**向左移动机械臂**”将机械臂移至左侧。
3. Open the QIASymphony AS hood.  
打开 QIASymphony AS 防护罩。
4. Remove the tip disposal chute from the worktable.  
从工作台上移开吸头弃置槽。
5. Soak in a glyoxal and quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) for at least 15 min.  
浸于乙二醛和含季铵盐的消毒剂（如 Gigasept Instru AF）中至少 15 分钟。
6. Rinse with water and wipe dry with paper towels.  
用水清洗并用纸巾拭干。

<b>Important</b> <b>重要</b>	Residual liquid from the tip disposal chute may drip. 吸头处置槽中的残留液体可能会滴漏。
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#### 14.4.3 Drawers and lysis station (SP) 抽屉和裂解台(SP)

1. Remove all removable objects (tube carriers, adapters, inserts, liquid waste station/tip park station, tip disposal chute, liquid waste bottle, waste bag holder, reagent box holder) from the drawers.  
从抽屉卸除所有可卸除的物品（试管/孔板托架，适配器，垫片，废液台/吸头静置台，吸头处置槽，废液瓶，废弃物包固定架，试剂盒基座）。
2. Wipe the drawers, the removed objects, and the lysis station with ethanol-based disinfectant (e.g., Mikrozid) and incubate as appropriate. Then wipe with a cloth moistened with water and dry with paper towels. Return the objects to the drawers.  
用含乙醇的消毒剂（如 Mikrozid）擦拭抽屉、可卸除物品及裂解台，根据需要进行孵育。然后用蘸水的软布擦拭并用纸巾擦干。将物品放回到抽屉中。
3. **Optional:** Clean the removed objects by soaking them in a glyoxal and quaternary ammonium salt-based disinfectant (e.g., Gigasept Instru AF) according to the manufacturer’s instructions. After incubation according to manufacturer’s instructions, rinse the removed objects thoroughly with water. 可选：根据制造商的说明，通过浸于乙二醛和含季铵盐的消毒剂（如 Gigasept Instru AF）清洁卸除的物品。根据制造商的要求进行孵育后，用清水彻底冲洗卸除的物品。

<b>Important</b> <b>重要</b>	There are spikes below the piercing device in the “Reagents and Consumables” drawer that ensure that the reagent cartridge is correctly positioned. Take care when cleaning the “Reagents and Consumables” drawer.
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	长钉位于“试剂和耗材”抽屉中穿孔装置的下方，用于确保试剂条的正确就位。 当清洁“试剂和耗材”抽屉时需留意。
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#### 14.4.4 Drawers (AS) 抽屉(AS)

1. Remove all removable objects (tubes/plates, adapters) from the drawers.  
从抽屉卸除所有可卸除的物品（试管/孔板，适配器）。
2. Wipe the drawers and the removed adapters with quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) and incubate as appropriate. Then wipe with a cloth moistened with water and dry with paper towels. Return the objects to the drawers.  
用含乙醇的消毒剂（如 Mikrozid）擦拭抽屉和可卸除适配器，根据需要进行孵育。然后用蘸水的软布擦拭并用纸巾擦干。将物品放回到抽屉中。
3. **Optional:** Clean the removed adapters by soaking them in a glyoxal and quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) according to the manufacturer’s instructions. After incubation according to manufacturer’s instructions, rinse the removed objects thoroughly with water.  
可选：根据制造商的说明，通过浸于乙二醛和含季铵盐的消毒剂（如 Gigasept Instru AF）清洁卸除的物品。根据制造商的要求进行孵育后，用清水彻底冲洗卸除的物品。
4. We recommend storing the adapters at 4°C, so that they will be precooled and ready for use in the next assay run. 我们建议适配器应在 4°C 下储存，这样他们将可预先冷却并准备用于下一检测运行。

#### 14.4.5 Conveyor base tray (SP) — optional 传送装置基底托盘(SP) - （可选）

1. Carefully remove the conveyor base tray from below the magnetic head.  
小心从磁头下方卸除传送装置基底托盘。
2. Soak in a glyoxal and quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) for at least 15 min.  
浸于乙二醛和含季铵盐的消毒剂（如 Lysetol AF）中至少 15 分钟。
3. Rinse with water and wipe dry with paper towels. 用水清洗并用纸巾拭干。

<b>Important</b> <b>重要</b>	The tray can also be autoclaved at 121°C for 20 min. 托盘还可在 121 ° C 下高压灭菌 20 分钟。
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#### 14.4.6 Robotic gripper (SP) 机械手夹持器(SP)

1. Wipe the robotic gripper with a lint-free cloth moistened with ethanol-based disinfectant (e.g., Mikrozyd). Incubate as appropriate.  
用无绒布蘸含乙醇的消毒剂（如 Mikrozyd）来擦拭机械手夹持器。适当时候进行孵育。
2. Wipe with a lint-free cloth moistened with water and dry with paper towels. 用蘸水的无绒布擦拭，并用纸巾擦拭干。

<b>Important</b> <b>重要</b>	Only wipe the weight. Do not wipe the rods otherwise the ball mechanism may become jammed. 只可擦拭重物。不得擦拭杆，否则球形结构可能会被卡住。
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#### 14.4.7 Liquid waste container (SP) 废液容器(SP)

1. Remove the liquid waste container from the “Waste” drawer.  
从“废弃物”抽屉卸除废液容器。
2. Empty the liquid waste container. Dispose of the liquid waste according to your local safety regulations.  
清空废液容器。遵照您当地的安全法规弃置废液。
3. Clean the liquid waste container with a glyoxal and quaternary ammonium salt based disinfectant (e.g., Gigasept Instru AF) according to the manufacturer’s instructions.  
根据制造商说明，用二醛和含季铵盐的消毒剂（如 Gigasept Instru AF）清洁废液容器。
4. Rinse the liquid waste container with deionized water.  
用去离子水清洗废液容器。
5. Replace the liquid waste container in the “Waste” drawer. 替换“废弃物”抽屉的废液容器。

### 14.5 Weekly maintenance (SP/AS) 每周维护操作

#### 14.5.1 File management 文件管理

1. Download the result file(s) (for QIASymphony SP and QIASymphony AS) and loading information files (QIASymphony AS only) as described in Section 6.3 and ensure that the files are backed up.

下载如第 6.3 节所述的结果文件（QIASymphony SP 和 AS）和加载信息文件（仅 QIASymphony AS），并确保文件得到备份。

2. Delete result files older than 10 days (default setting) as described in Section 6.6. 删除 10 天（默认设置）以前的旧结果文件，如第 6.6 节描述。

#### 14.5.2 Cleaning the touchscreen 清洁触摸屏

Wipe the touchscreen with ethanol-based disinfectant (e.g., Mikrozid). Then wipe with a cloth moistened with water and dry with paper towels.  
用含乙醇的消毒剂（如 Mikrozid）擦拭触摸屏。然后用蘸水的软布擦拭并用纸巾擦干。

#### 14.5.3 Cleaning the QIASymphony SP/AS hoods 清洁 QIASymphony SP/A 防护罩

To clean the hoods of QIASymphony SP/AS instruments, wipe the surface with a soft lint-free cloth moistened with deionized water, or use wipes soaked with Mikrozid Sensitive Liquid. Then wipe dry with a dry soft lint-free cloth or paper towel.  
要清洁 QIASymphony SP/AS 仪器的防护罩，请用蘸去离子水的无绒软布擦拭表面，或使用 Mikrozid 敏液浸湿的抹布。然后用干无绒软布或纸巾拭干。

<b>Important 重要</b>	Do not use ethanol-based disinfectant; use distilled water or Mikrozid Sensitive Liquid only. 请勿使用含乙醇的消毒剂；仅可使用蒸馏水或 Mikrozid 敏液。
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#### 14.5.4 Cleaning the tube carriers (SP) 清洁试管托架(SP)

1. Remove tube carriers, adapters, and inserts and soak them in disinfectant (e.g., Gigasept Instru AF). Incubate for at least 15 min, then rinse with water and dry with paper towels.  
卸除试管/孔板托架、适配器和垫片，并用消毒剂（Gigasept Instru AF）浸湿。孵育至少 15 分钟，然后用水清洗并用纸巾拭干。
2. Check the condition of the bar code labels and ensure that they are not scratched. 检查条形码标签的状况，确保它们没有擦痕。

#### 14.5.5 Cleaning the optical sensor (SP) 清洁光学传感器(SP)

Wipe the window of the optical sensor with a lint-free cloth. Moisten the cloth with 70% ethanol if required.

用无绒布擦拭可选传感器的窗口。如果必要，用 70%乙醇浸润软布。

#### 14.5.6 Magnetic head (SP) 磁头(SP)

1. Remove the cover from the magnetic head.  
卸除磁头的盖子。
2. Move the magnetic head up and carefully push the rod cover holder down.  
向上移动磁头，小心地向下推磁棒套基座。



3. Wipe the exterior of the magnetic head with a lint-free cloth moistened with ethanol-based disinfectant (e.g., Mikrozyd), and incubate as appropriate.  
用无绒布蘸含乙醇的消毒剂（如 Mikrozyd）来擦拭磁头外部，必要时进行孵育。
4. Wipe with a lint-free cloth moistened with water and dry with paper towels. 用蘸水的无绒布擦拭，并用纸巾擦拭干。

<b>Important</b> <b>重要</b>	Insert the cloth from the sides of the magnetic head in order not to damage the cable and electronic board at the front.
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#### 14.5.7 Liquid waste container (SP)

##### 废液容器(SP)

1. Remove the liquid waste container from the “Waste” drawer.  
从“废弃物”抽屉卸除废液容器。
2. Empty the liquid waste container. Dispose of the liquid waste according to your local safety regulations.  
清空废液容器。遵照您当地的安全法规弃置废液。
3. Disinfect the liquid waste container using ethanol-based disinfectant (e.g., Mikrozyd).  
用含乙醇的消毒剂（如 Mikrozyd）消毒废液容器。
4. Replace the liquid waste container in the “Waste” drawer. 重新装饰“废弃物”抽屉的废液容器。

#### 14.5.8 Cleaning adapters (AS)

##### 清洁适配器

1. Remove the adapters from the “Eluate and Reagents” and “Assays” drawers and soak them in disinfectant (e.g., Gigasept Instru AF). Incubate for at least 15 min.  
从“洗脱物和试剂”和“检测”抽屉卸除适配器，并用消毒剂（如 Gigasept Instru AF）浸湿。孵育至少 15 分钟。
2. Rinse with water and dry with paper towels.  
用水清洗并用纸巾拭干。
3. Check the condition of the bar code labels and ensure that they are not scratched. 检查条形码标签的状况，确保它们没有擦痕。

#### 14.6 UV decontamination of the worktable

##### 工作台的紫外净化

UV decontamination should be performed daily. It helps to reduce possible pathogen contamination of the QIASymphony SP/AS worktables. The efficiency of inactivation has to be determined for each specific organism and depends, for example, on layer thickness and sample type. QIAGEN cannot guarantee complete eradication of specific pathogens. 紫外净化有助于减少 QIASymphony SP/AS 工作台可能的病原体污染。对于每种特定有机物以及，比如不同的层厚度和样本类型，灭活效率不同。QIAGEN 无法确保完全清除特定病原体。

<b>Important</b> <b>重要</b>	It is not possible to start UV decontamination on the QIASymphony SP and QIASymphony AS worktables at the same time. 不可同时在 QIASymphony SP 和 QIASymphony AS 工作台上启动紫外净化。
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<b>Important 重要</b>	<p>Before starting the UV irradiation procedure ensure that all samples, eluates, reagents, consumables, and assays have been removed from the worktable. Close all drawers and the hoods. Once the UV irradiation procedure has been started, it will continue for the defined period of time, or until interrupted by the user.</p> <p>在启动紫外辐照操作之前，请确保已从工作台卸除了所有样本、洗脱物、试剂、耗材和检测物。关闭所有抽屉和防护罩。启动紫外辐照操作后，将以设定的时间段进行消毒，或中间用户停止消毒。</p>
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We recommend using the following formula to calculate the duration of decontamination in minutes:

我们建议使用以下公式计算净化持续时间（分钟计）：

$$\text{Dose (mW x s/cm}^2\text{)} \times 10.44 = \text{Duration (seconds)}$$

$$\text{剂量 (mWxs/cm}^2\text{)} \times 10.44 = \text{持续时间 (分钟)}$$

1. Remove all removable objects (tubes/plates, adapters, consumables, tip disposal chute) except for the liquid waste bottle from the drawers.  
从抽屉卸除所有可卸除的物品（试管/孔板，适配器，耗材，吸头处置槽）。

2. Enter the **Maintenance** screen, and press **Maintenance SP** or **Maintenance AS**.



进入“**维护**”界面，然后点击“**维护 SP**”或“**维护 AS**”。



The **Maintenance AS** button is only available if you are using QIASymphony SP/AS instruments

仅在使用 QIASymphony SP/AS 仪器时，才可操作“**维护 AS**”按钮。

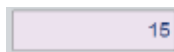
3. Press the **Start UV light** button.



点击“**启动紫外灯**”按钮。

The **Input/UV cleanup/Duration** screen will open.

随即打开“**输入/紫外净化/时长**”界面。



4. Enter the duration of the decontamination in min.

The default setting is 15 min. The UV irradiation time is dependent on the pathogen. Use the formula above to calculate the irradiation time and then enter the time into the input box.

A message appears asking you to check whether all plasticware and consumables have been removed from the worktable

输入净化时间（单位：分钟）。

默认设定为 15 分钟。紫外辐照时间视病原体而定。使用以上公式计算辐

照时间，然后在输入框中输入时间。

随即出现一条消息，要求您检查是否已从工作台卸除所有的塑料器具和耗材。

Before performing UV irradiation:

1. Remove all removable objects from the worktable:

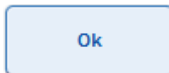
- samples
- reagent cartridges
- consumables
- eluates
- tube/plate carriers
- adapters
- inserts
- tip park/liquid waste station
- tip disposal chute
- tip racks
- unit boxes
- buffer bottle
- accessory trough(s) ...



2. Close all drawers and the instrument hood.

Press "Ok" to start the UV lamp.

5. Confirm that all removable objects have been removed from the worktable by pressing **OK**.



The UV irradiation procedure starts and the robotic arm moves over the worktable surface for the set irradiation duration.

点击“OK。”确认已从工作台卸除所有的可卸除物品。然后紫外灯启动，机械臂在设定的辐照时间内移至工作台表面之下。

<b>Important</b> <b>重要</b>	<p>To stop the UV irradiation procedure before the defined period of time has elapsed, press <b>Cancel</b>. The procedure will stop as soon as the robotic arm completes the current movement.</p> <p>在辐照过程中要停止紫外辐照，请点击“取消”。操作将在机械臂完成当前运动后即刻停止。</p>
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<b>Important</b> <b>重要</b>	<p>UV irradiation of the QIASymphony SP and AS must be performed sequentially and cannot be performed in parallel. The second irradiation may be left to run overnight.</p> <p>QIASymphony SP 和 AS 的紫外照射必须依次进行，不可同时进行。第二次照射可以过夜完成。</p>
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### 14.7 Maintenance of the tip adapter O-ring 维护吸头适配器 O 形圈

This section describes replacing the tip adapter O-ring using the O-Ring Change Tool Set (cat. no. 9019164) to perform O-ring change. The O-rings must be changed every month using the O-Ring Change Tool Set.

本节描述如何使用 O 型圈更换工具套装(cat. no. 9019164)更换吸头适配器 O 形圈。此类 O 型圈必须每月采用 O 型圈更换工具套装更换。

Before removing the old O-ring, the new O-ring must be prepared. These steps should be performed for both the QIASymphony SP and the QIASymphony AS instruments.

移除旧 O 型圈前，必须准备好新的 O 型圈。此类步骤必须同时针对 QIASymphony SP 和 QIASymphony AS 仪器进行。

For instructions, refer to the quick guide that is equipped with the O-Ring Change Tool Set. If there is no O-Ring Change Tool Set available, contact QIAGEN Technical Services.

如需了解相关说明，请参阅 O 型圈更换工具套装随附的快速指南。如果您没有 O 型圈更换工具套装，请联系 QIAGEN 技术服务部咨询。





# 15 Technical Data

## 技术数据

QIAGEN reserves the right to change specifications at any time.

QIAGEN 保留随时更改技术规格的权利。

### 15.1 Environmental conditions

#### 环境条件

<b>Operating</b>	<b>conditions</b>
<b>运行条件</b>	
Power consumption QIAsymphony SP QIAsymphony SP 功耗	100–240 V AC, 50/60 Hz, 800 VA
Power consumption QIAsymphony AS QIAsymphony AS 功耗	100–240 V AC, 50/60 Hz, 600 VA  Mains supply voltage fluctuations are not to exceed 10% of nominal supply voltages. The inlet is on the QIAsymphony SP; in combined operation, the maximum power consumption is 1400 VA. 主电源的电压波动不可超过额定供电电压的 10%。进气口位于 QIAsymphony SP；在组合操作时，最大功耗为 1400 VA。
Overvoltage category 过电压类别	II
Air temperature 气温	15–32°C (59–89.6°F)
Relative humidity 相对湿度	15–75% (noncondensing) 15–75% (非凝结状态)  Maximum 75% relative humidity for temperatures up to 31°C (88°F), decreasing linearly to 50% humidity at 32°C (89.6°F) 最高温度 31°C(88°F) 时最高为 75% 的相对湿度，32 °C(89.6 °F)时直线降至 50%的湿度。
Altitude 海拔	Up to 2000 m (6500 ft.) 最高 2000 米(6500 英尺)
Place of operation 运行场所	For indoor use only 仅供室内使用
Pollution level 污染级别	2
Environmental class 环境等级	3K2 (IEC 60721-3-3) 3M2 (IEC 60721-3-3)
<b>Transportation</b>	<b>conditions</b>
<b>运输条件</b>	

Air temperature 气温	-25°C to 70°C (-13°F to 158°F) in manufacturer's package 制造商包装内为-25°C-70°C(-13°F-158°F)
Relative humidity 相对湿度	Maximum of 75% (noncondensing) 最高 75% (非凝结状态)
Environmental class 环境等级	2K2 (IEC 60721-3-2) 2M2 (IEC 60721-3-2)

**Storage  
储存条件**

*conditions*

Air temperature 气温	5°C to 40°C (41°F to 104°F) in manufacturer's package 制造商包装内为 5°C-40°C(41°F-104°F)
Relative humidity 相对湿度	Maximum of 85% (noncondensing) 最高 85% (非凝结状态)
Environmental class 环境等级	1K2 (IEC 60721-3-1) 1M2 (IEC 60721-3-1)

## 15.2 Mechanical data and hardware features 机械参数和硬件特性

### **QIASymphony SP**

Dimensions 尺寸	Width: 128 cm (50.4 in.)
	Height: 103 cm (40.6 in.)
	Depth: 73 cm (28.7 in.)
	宽: 128 cm (50.4 in.)
	高: 103 cm (40.6 in.)
厚: 73 cm (28.7 in.)	
Weight 重量	175 kg (385.8 lb.)

### **QIASymphony AS**

Dimensions 尺寸	Width: 59 cm (23.2 in.)
	Height: 103 cm (40.6 in.)
	Depth: 73 cm (28.7 in.)
	宽: 59 cm (23.2 in.)
	高: 103 cm (40.6 in.)
厚: 73 cm (28.7 in.)	
Weight 重量	90 kg (198 lb.)

### **QIASymphony SP and AS (integrated operation)**

### **QIASymphony SP 和 AS (集成操作)**

Dimensions  
尺寸

Width: 185 cm (72.8 in.)  
Height: 103 cm (40.6 in.)  
Depth: 73 cm (28.7 in.)  
宽： 185 cm (72.8 in.)  
高： 103 cm (40.6 in.)  
厚： 73 cm (28.7 in.)

Weight  
重量

265 kg (584 lb.)

## 16 User Interface Addendum

### 用户界面附录

This section provides an overview of the QIASymphony SP/AS user interface. The names of tabs, tools, and buttons are displayed in alphabetical order. The availability of the software options is denoted using the following abbreviations: 本章概述了 QIASymphony SP/AS 的用户界面。标签工具及按钮的名称按照字母顺序排序。软件选项的适用性则采用如下的缩写注释。

AS = QIASymphony AS application

AS = QIASymphony AS 应用程序

SP = QIASymphony SP application

SP = QIASymphony SP 应用程序

IR = Integrated run (QIASymphony SP/AS) application

IR = 集成运行(QIASymphony SP/AS)应用程序

TIs = Tools options for QIASymphony SP/AS

TIs = QIASymphony SP/AS 工具选项

In addition, the name of each menu option is provided together with a description of the option. Several workflows may use the option, and workflow-specific descriptions are included.

除此之外，各个菜单选项的名称均随附了相应的描述。部分工作流程可能会使用某些选项，这些工作流程专用选项也包含在下述汇总内。

For detailed information about the user interface refer to the following: 有关用户界面的详细信息，请参阅如下内容：

Section 3 of the *QIASymphony SP/AS User Manual — Operating the QIASymphony SP*







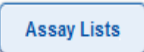
Section 3 of the *QIASymphony SP/AS User Manual — Operating the QIASymphony AS*

*QIASymphony SP/AS 用户手册第 3 章 – 操作 QIASymphony SP*





*QIASymphony SP/AS 用户手册第 3 章 – 操作 QIASymphony AS*

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
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Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS	<b>Assay Specifications 检测规格</b> Enables addition of a custom control. 允许添加自定义控件。
	SP	Tls <b>User Management/User Overview 用户管理/用户概览</b> Enables creation of a new user account. 允许创建新的用户账户。
	AS	IR <b>Assay Assignment 检测分配</b> Shows all selected Assay Parameter Sets in the tab view. 在标签视图中显示所有选中的检测参数集。
		Tls <b>File transfer/Process Files 文件传输/处理文件</b> Enables download/upload of Assay Control Set file(s). 允许下载/上传检测对照集文件。
		Tls <b>File transfer/Process Files 文件传输/处理文件</b> Enables download/upload of Assay Definition file(s). Only visible when the QIASymphony AS is installed. 允许下载/上传检测定义文件。仅在安装 QIASymphony AS 时可见。
	AS	Tls <b>Tools 工具</b> Opens the <b>Assay Favorites</b> menu. Allows definition of assay favorites. 打开“ <b>检测收藏夹</b> ”菜单。允许定义检测收藏夹、
	AS	<b>Assay Selection 检测选择</b> Displays the assay lists. The <b>Assay Lists</b> button is active when the screen is in the work lists mode. 显示检测列表。当界面处于工作列表模式时，“ <b>检测列表</b> ”按钮激活。
	AS	IR Tls <b>File transfer/Process Files 文件传输/处理文件</b> Enables download/upload of Assay Parameter Set file(s). Only visible when the QIASymphony AS is installed. 允许下载/上传检测参数集文件。仅在安装 QIASymphony AS 时可见。

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS	<p><b>Assay Assignment</b> <b>检测分配</b></p> <p>Enables the user to assign an Assay Parameter Set that is selected in the tab in the slot 1, slot 2, or other view to the selected sample position(s). After an Assay Parameter Set is assigned to a sample, the color changes and the number of assigned Assay Parameter Sets appears.</p> <p>允许用户将在槽 1、槽 2 的标签或者其他视图中选中的检测参数分配到选中的样本位置。在将检测参数集分配到样本时，颜色会变化，同时出现分配的检测参数集数目。</p>
	AS	<p><b>Sample Rack(s)/Loading Information</b> <b>样本架/加载信息</b></p> <p>Enables generation of a rack ID (only for assay racks).</p> <p>允许生成管架 ID (仅适用于检测管架)。</p>
	AS SP	<p><b>Integrated Setup/Sample Preparation</b> <b>集成设置/样本制备</b></p> <p>Opens the previous screen.</p> <p>打开前一界面。</p>
	SP	<p><b>Consumables/Cartridges/Filter-Tips</b> <b>耗材/卡夹/带滤芯的吸头</b></p> <p>Displays the "Keyboard" screen to enter or scan the bottle ID.</p> <p>显示“键盘”界面，从而输入或扫描试剂瓶 ID。</p>
	AS SP IR Tls	<p><b>Miscellaneous</b> <b>其他</b></p> <p>Cancels a completed workflow without saving the changes.</p> <p>不保存更改，取消完成的工作流程。</p>
	Tls	<p><b>Files transfer/Instr. Setup Files</b> <b>文件传输/仪器设置文件</b></p> <p>Enables upload/download of new reagent cartridge information.</p> <p>允许上传/下载新的试剂条信息。</p>
	Tls	<p><b>User Management/User Overview</b> <b>用户管理/用户概览</b></p> <p>Enables you to change your password.</p> <p>允许更改密码。</p>
	Tls	<p><b>User Management/User Overview</b> <b>用户管理/用户概览</b></p> <p>Enables the role of an existing user to be changed. This option is only available to the "Supervisor".</p> <p>允许更改现有用户的身份。此选项仅可供“Supervisor”使用。</p>


Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS SP	<p><b>Sample Preparation/Sample ID/ Assay Setup</b> <b>样本制备/样本 ID/检测构建</b></p> <p>Removes text from the text field. 从文本字段删除文本。</p>
	IR	<p><b>Integrated Setup</b> <b>集成设置</b></p> <p>Deletes the assigned Assay Parameter Set(s) from selected sample position(s). 从选中的样本位置删除分配的检测参数集。</p>
	SP	<p><b>Consumables</b> <b>耗材</b></p> <p>Switches back from the <b>Sample Calculation</b> to the <b>Consumables</b> view. 从“样本计算”视图切回“耗材”视图。</p>
	TIs	<p><b>Tools</b> <b>工具</b></p> <p>Displays the <b>Configuration</b> menu. Only available for the “Supervisor”. 显示“配置”菜单。仅可供“Supervisor”使用。</p>
	TIs	<p><b>Transfer files/In-/Output Files</b> <b>传输文件/输入/输出文件</b></p> <p>Enables download of start batch confirmation files. 允许下载启动批次确认文件。</p>
	AS SP	<p><b>Sample Preparation/Command bar/Assay Setup</b> <b>样本制备/命令栏/检测构建</b></p> <p>Continues the run. The <b>Continue</b> button appears if the current run is paused. After pausing, the samples of the processed batch will be flagged as “unclear”. 继续运行。如果目前的运行暂停，则会出现“继续”按钮。暂停后，处理的批次中的样本将会标记为“不定”。</p> <p><b>Note:</b> A run should only be paused in case of an emergency. <b>注意：</b> 仅可在出现紧急情况时暂停运行。</p>
	TIs	<p><b>Instrument Report</b> <b>仪器报告</b></p> <p>Creates an instrument report file. 创建仪器报告文件。</p>
	TIs	<p><b>Transfer files/In-/Output Files</b> <b>传输文件/输入/输出文件</b></p> <p>Enables download of cycler file(s). Only visible when the QIASymphony AS is installed. 允许下载 PCR 扩增文件。仅在安装 QIASymphony AS 后可见。</p>






Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	IR	<p><b>Integrated Run</b> <b>集成运行</b></p> <p>Enables definition of an internal control. This button is active only when internal controls are loaded in a tube carrier. 允许定义内参。仅可内参加载到试管托架中时，此按钮才会激活。</p>
	IR	<p><b>Integrated Setup</b> <b>集成设置</b></p> <p>Opens the <b>Assay Assignment</b> screen. 打开“<b>检测分配</b>”界面。</p>
	Tls	<p><b>File transfer/In-/Output Files</b> <b>文件传输/输入/输出文件</b></p> <p>Deletes input and output files (except log files) that are older than a defined number of days. The default is 10 days. 删除早于指定天数的输入和输出文件（日志文件除外）。默认天数为 10 天。</p>
	IR	<p><b>Integrated Setup</b> <b>集成设置</b></p> <p>Opens a message box that provides detailed information about the assigned assays and the integrated batch. 打开一个消息对话框，其中提供了有关分配的检测和集成批次的详细信息。</p>
	AS IR	<p><b>Assay Setup/Integrated Setup</b> <b>检测构建/集成设置</b></p> <p>Enables the user to deselect all selected positions. 允许用户删除所有选中的位置。</p>
	IR	<p><b>Integrated Setup</b> <b>集成设置</b></p> <p>Opens the “Sample Preparation/ Batch X/Define Samples” screen. 打开“<b>样本制备/批次 X/定义样本</b>”界面。</p>
	AS SP IR	<p><b>Sample Preparation/Eluate Drawer/Integrated Setup</b> <b>样本制备/洗脱物抽屉/集成设置</b></p> <p>Displays the <b>Keyboard</b> screen, enabling the user to manually enter sample IDs. 显示“<b>键盘</b>”界面，允许用户手动输入样本 ID。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	SP	<p><b>Sample Preparation/Internal Controls</b> <b>样本制备/内参</b></p> <p>Displays the <b>Internal controls</b> list, enabling the user to assign the correct internal control to the selected position. 显示“<b>内参</b>”列表，允许用户为选中的位置分配正确的内参。</p>
	AS SP	<p><b>Define Samples/Sample Rack Layout</b> <b>定义样本/样本架布局</b></p> <p>Sets the sample type of the selected samples to EC+ (positive external control). 将选中的样本的样本架类型设为 EC+（阳性外参）。</p>
	AS SP	<p><b>Define Samples/Sample Rack Layout</b> <b>定义样本/样本架布局</b></p> <p>Sets the sample type of the selected samples to EC- (negative external control). 将选中的样本的样本架类型设为 EC-（阴性外参）。</p>
		<p>TIs <b>Sample Preparation/Tools</b> <b>样本制备/工具</b></p> <p>Opens the <b>File transfer</b> menu, enabling transfer of selected file types to the QIAasymphony SP/AS or to the USB stick. 打开“<b>文件传输</b>”菜单，允许向 QIAasymphony SP/AS 或 USB 盘传输选中类型的文件。</p>
		<p>TIs <b>Rack browser/Sample Racks</b> <b>Rack browser/Eluate Racks</b> <b>Rack browser/Assay Racks</b> <b>管架浏览器/样本管架</b> <b>管架类型/洗脱管架</b> <b>管架类型/检测管架</b></p> <p>Enables the user to manually enter and then search for IDs using the <b>Keyboard</b> screen. 允许用户使用“<b>键盘</b>”界面手动输入并搜索 ID。</p>
	SP	<p><b>Sample Preparation</b> <b>样本制备</b></p> <p>Completes the <b>Wizard</b>. This button is only visible in the <b>Wizard</b> when the last batch has been defined and no internal control is required. 完成“<b>向导</b>”。仅在上一批次完成且不需要内参时，此按钮才在“<b>向导</b>”中可见。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS SP IR Tls	<p><b>Miscellaneous</b> <b>其他</b></p> <p>Provides information to help the user complete the current screen. 提供有助于用户完成当前界面内容的信息。</p>
		<p>Tls <b>Instrument Report</b> <b>仪器报告</b></p> <p>Displays the <b>Instrument Report</b> menu. 显示“<b>仪器报告</b>”菜单。</p>
	SP IR	<p><b>Sample Preparation/Integrated Setup</b></p> <p>Allows the user to edit sample IDs and sample types.</p>
	SP IR	<p><b>Sample Preparation/Integrated run</b> <b>样本制备/集成运行</b></p> <p>Displays the <b>Inserts/Tube types</b> list. This enables the user to assign the correct tube type to the position. 显示“<b>垫片/试管类型</b>”列表，允许用户向特定位置分配正确类型的试管。</p>
		<p>Tls <b>Service SP/Service AS</b> <b>服务 SP/服务 AS</b></p> <p>Allows the user to initialize the QIASymphony instrument. After pressing the button, press <b>Yes</b> to initialize or <b>No</b> to cancel. 允许用户初始化 QIASymphony 仪器。点击此按钮后，可点击“<b>是</b>”开始初始化，或者点击“<b>否</b>”取消初始化。</p>
		<p>Tls <b>Labware browser/Labware SP</b> <b>器具浏览器/器具 SP</b></p> <p>Opens the “Input Racks” dialog panel and provides information about which sample racks can be used. 打开“<b>输入管架</b>”对话框面板，提供有关可用的样本管架的信息。</p>
		<p>Tls <b>Labware browser/Labware AS</b> <b>Labware browser/Labware SP</b> <b>器具浏览器/器具 AS</b> <b>器具浏览器/器具 SP</b></p> <p>Opens the <b>Labware</b> dialog panel. 打开“<b>器具</b>”对话框面板。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	SP	<p><b>File transfer/Instr. Setup Files</b> <b>文件传输/仪器设置文件</b></p> <p>Enables download/upload of QIASymphony AS labware file(s). 允许下载/上传 QIASymphony AS 器具文件。</p>
		<p>TIs <b>Tools</b> <b>工具</b></p> <p>Opens the <b>Labware Browser</b> menu. 打开“<b>器具浏览器</b>”菜单。</p>
		<p>TIs <b>Instr. Setup Files</b> <b>仪器设置文件</b></p> <p>Enables download/upload of the QIASymphony SP labware file(s). 允许下载/上传 QIASymphony SP 器具文件。</p>
		<p>TIs <b>Service SP/Service AS</b> <b>服务 SP/服务 AS</b></p> <p>Opens script output. This button is enabled after an operator service script has been performed. 打开脚本输出。在执行操作员服务脚本之后，此按钮启用。</p>
		<p>TIs <b>Rack browser/Sample Racks</b> <b>Rack browser/Eluate racks</b> <b>Rack browser/Assay Rack</b> <b>管架浏览器/样本管架</b> <b>管架浏览器/洗脱管架</b> <b>管架浏览器/检测管架</b></p> <p>Displays the rack files that were modified between 00:00 of Monday last week and 00:00 of Monday of the current week. 显示从上周周一 00:00 至本周周一 00:00 之间修改的管架文件。</p>
	AS	<p><b>Assay Setup/Loading Information</b> <b>检测构建/加载信息</b></p> <p>Displays a screen that contains information about the assigned Assay Parameter Sets in a table. 显示含有有关表内分配的检测参数集的信息的界面。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS IR	<p><b>Assay Setup/Loading Information</b> <b>检测构建/加载信息</b></p> <p>Enables a reagent/normalization rack to be loaded. Press when loading the reagent/normalization rack. The system will check during the inventory scan whether reagent/normalization, sample, and assay racks were loaded correctly.</p> <p>允许加载试剂/标准化管架。加载试剂/标准化管架时点击此按钮。在库存扫描期间，系统将会检查试剂/标准化、样本和检测管架是否正确加载。</p>
		<p>Tls <b>File Transfer/In-/Output Files</b> <b>文件传输/输入/输出文件</b></p> <p>Enables download of loading information file(s). Only visible when the QIASymphony AS is installed.</p> <p>允许下载加载信息文件。仅在安装 QIASymphony 后可见。</p>
		<p>Tls <b>File Transfer/In-/Output Files</b> <b>文件传输/输入/输出文件</b></p> <p>Enables download of system log file(s).</p> <p>允许下载系统日志文件。</p>
	AS	<p>Tls <b>Tools</b> <b>工具</b></p> <p>Switches to the assay setup user interface and displays the <b>Maintenance AS</b> menu for the QIASymphony AS.</p> <p>切换到检测构建用户界面，并显示 QIASymphony AS 的“<b>维护 AS</b>”菜单。</p>
	AS SP	<p>Tls <b>Tools</b> <b>工具</b></p> <p>Displays the <b>Maintenance SP</b> menu.</p> <p>显示“<b>维护 SP</b>”菜单。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS SP	<p><b>Sample Preparation</b> <b>Assay Setup</b> <b>样本制备</b> <b>检测构建</b></p> <p>Saves changes and opens the next screen. 保存更改并打开下一界面。</p>
	SP	<p><b>Sample Preparation</b> <b>样本制备</b></p> <p>Saves changes and opens the next screen. Becomes active if a sample slot containing a 24-well rack is selected or if a sample slot containing a 96-well rack has half/quarter of the positions selected. This button is available during the run definition process. The button becomes active when all necessary information for the current step is given. 保存更改并打开下一界面。如果选中了含有 24 孔管架的样本槽，或者选中了含有 96 孔管架的样本槽之中的一半/四分之一位置，则此按钮激活。在运行定义过程中，此按钮可用。当给出当前步骤所需的所有信息时，此按钮激活。</p>
	AS	<p><b>Sample Rack Layout</b> <b>样本管架布局</b></p> <p>Saves changes and opens the next screen. Becomes active for each available "Sample" slot when at least one sample/EC+/EC- is assigned and all assigned positions have a defined volume. 保存更改并打开下一界面。如果至少分配了一个样本/EC+/EC-且所有分配的位置均为指定的体积，则各个可用的“样本”槽激活。</p>
	SP	<p><b>General Buttons</b> <b>常规按钮</b></p> <p>Opens the next screen in the workflow. 打开工作流程中的下一界面。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Defines a new assay run. Available when no assay run is currently defined. 定义一次新的检测运行。目前未定义检测运行时，此按钮可用。</p>
	Tls	<p><b>File Transfer</b> <b>文件传输</b></p> <p>Ensures that selected files should not be synchronized when Transfer is pressed. 确保按下“传输”时，选中的文件不会被同步化。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS IR	<b>Assay Setup</b> <b>检测构建</b> Saves changes and returns to the recent screen. 保存更改并返回最近的界面。
	AS SP IR	<b>Assay Setup/Eluate Drawer</b> <b>检测构建/洗脱物抽屉</b> Closes the screen. 关闭界面。
	SP IR	<b>Eluate Drawer</b> <b>洗脱物抽屉</b> Performs an inventory scan of the “Eluate” drawer to check the inventory of the “Eluate” drawer against the slot/rack assignment made in the <b>Eluate Drawer/Elution Slot/Change Rack X</b> screen. 进行一次“洗脱物”抽屉库存扫描，针对“洗脱物抽屉/洗脱槽/更换管架 X”界面进行的槽/管架分配，检查“洗脱物”抽屉库存。
	AS SP	<b>Sample Racks/Eluate Racks/Assay Racks</b> <b>样本管架/洗脱物管架/检测管架</b> Displays the rack files that were modified before 00:00 of Monday last week. 显示在上周一 00:00 之前修改的管架文件。
	Tls	<b>Labware browser/Labware SP</b> <b>器具浏览器/器具 SP</b> Opens the <b>Output Racks</b> dialog panel and provides information about which elution racks can be used. 打开“输出管架”对话框，并提供有关可用的洗脱管架的信息。
	AS SP	<b>Sample Preparation/Assay Setup</b> <b>样本制备/检测构建</b> Opens the assay setup <b>Overview</b> screen. This button is enabled when either the <b>Sample View</b> or <b>Parameter View</b> is open. 打开检测构建“概览”界面。打开“样本视图”或“参数视图”时，此按钮启用。

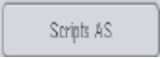
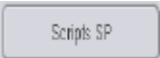


Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	SP	<p><b>Sample Preparation</b> <b>样本制备</b></p> <p>Pauses the QIASymphony SP. The <b>Pause</b> button should only be pressed in an emergency. After pressing <b>Pause</b>, the QIASymphony SP completes the current command being processed, pauses the protocol, and changes the sample state to “unclear”. If the protocol has been paused either by the user or due to an error, the <b>Stop</b> and <b>Continue</b> buttons appear.</p> <p>暂停 QIASymphony SP。仅可在紧急情况下按下“<b>暂停</b>”按钮。按下“<b>暂停</b>”之后，QIASymphony SP 会完成目前正在处理的命令，然后停止程序，并将样本状态切换为“不定”。如果由于用户或操作失误而使程序暂停，则会出现“<b>停止</b>”和“<b>继续</b>”按钮。</p>
	IR	<p><b>Command bar</b> <b>命令栏</b></p> <p>Pauses the QIASymphony AS. This button should only be pressed in case of an emergency. The QIASymphony AS completes the current command and then pauses the assay run. Samples will always be flagged as “unclear” if the run has been paused.</p> <p>暂停 QIASymphony AS。此按钮仅可在紧急情况下按下。QIASymphony AS 会完成当前的命令，然后暂停检测运行。如果运行暂停，样本会一直标记为“不定”状态。</p>
	IR	<p><b>Command bar</b> <b>命令栏</b></p> <p>Pauses the QIASymphony SP. The <b>Pause SP</b> button should only be pressed in case of an emergency. The QIASymphony SP completes the current command being processed and then pauses the protocol. Samples will always be flagged as “unclear” if the run has been paused.</p> <p>暂停 QIASymphony SP。“<b>暂停 SP</b>”按钮仅可在紧急情况下按下。QIASymphony SP 会完成当前正在处理的命令，然后暂停程序。如果运行暂停，样本会一直标记为“不定”状态。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Opens the <b>Parameter View</b> screen. This screen displays information in a tabular format about Assay Parameter Sets and specifications for samples that will be processed, that are currently being processed, or that have been processed.</p> <p>打开“<b>参数视图</b>”界面。此界面以表格的形式显示有关检测参数集以及待处理样本、正在处理的样本和已处理样本规格的信息。</p>



Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Opens the <b>Plate View</b> screen. This screen provides detailed loading information about the selected “Sample” or “Assay” slot.</p> <p>打开“<b>孔板视图</b>”界面。此界面提供有关选中的“样本”或“检测”槽的详细加载信息。</p>
		<p>TIs <b>File Transfer/Instr. Setup Files</b> <b>文件传输/仪器设置文件</b></p> <p>Enables download of custom process configuration profiles. 允许下载自定义过程配置程序。</p>
		<p>TIs <b>File transfer/Process Files</b> <b>文件传输/过程文件</b></p> <p>Enables download/upload of protocol file(s). 允许下载/上传程序文件。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Saves changes and opens the <b>Loading Information</b> screen. The button is active for all Assay Parameter Sets when at least one position is assigned.</p> <p>保存更改并打开“<b>加载信息</b>”界面。当所有检测参数集都至少分配了一个位置时，此按钮激活。</p>
	SP	<p><b>Sample Preparation</b> <b>样本制备</b></p> <p>Opens the <b>Sample Preparation/ Batch X</b> screen. The <b>Next</b> button becomes active if a sample slot containing a 24-well rack is selected or if a sample slot containing a 96-well rack has half/quarter of the positions selected.</p> <p>打开“<b>样本制备/批次 X</b>”界面。如果选中了含有 24 个孔的样本槽，或者选中了含有 96 孔管架的样本槽一半/四分之一位置，则“<b>下一步</b>”按钮激活。</p>
	AS SP	<p>TIs <b>Miscellaneous</b> <b>其他</b></p> <p>Displays the available sample rack types in the control panel. 在控制面板中显示可用的样本管理类型。</p>

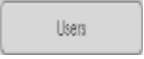


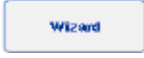

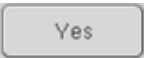
Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
		<p>Tls <b>Miscellaneous</b> <b>其他</b></p> <p>Displays the <b>Rack Browser</b> menu for viewing rack files saved on the QIASymphony SP/AS instrument. 显示“管架浏览器”菜单，以便查看保存在 QIASymphony SP/AS 仪器上的管架文件。</p>
	AS SP	<p><b>Assay Setup/Sample Preparation</b> <b>检测构建/样本制备</b></p> <p>Displays the available rack files in the control panel. 在控制面板中显示可选的管架文件。</p> <p>Tls <b>File Transfer/In-/Output Files</b> <b>文件传输/输入/输出文件</b></p> <p>Enables upload/download of the rack file(s). 允许上传/下载管架文件。</p>
	AS SP	<p><b>Assay Setup/Eluate Drawer</b> <b>检测构建/洗脱物抽屉</b></p> <p>Enables a rack ID to be scanned or manually entered. 允许扫描或手动输入管架 ID。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Displays the rack type list. 显示管架类型列表。</p>
	AS SP	<p><b>Loading Information/Loading Reagents</b> <b>加载信息/加载试剂</b></p> <p>Enables a reagent/normalization rack to be removed. Press when unloading the reagent/normalization rack. The system will check during the inventory scan whether the rack was unloaded correctly. 允许移除试剂/标准化管架。卸除试剂/标准化管架时可按下此按钮。库存扫描期间，系统将检查管架是否正确加载。</p>
	AS	<p><b>Labware browser/Labware AS</b> <b>器具浏览器/器具 AS</b></p> <p>Opens the <b>Reagent Holders</b> view in which information about reagent holders is displayed. 打开“试剂基座”视图，其中显示有关试剂基座的信息。</p>



Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS IR	<p><b>Sample Rack Layout</b> <b>样本管架布局</b></p> <p>Sets the sample type of the selected samples to “Sample”. 将选中的样本的样本类型设为“样本”。</p>
	SP	<p><b>Consumables</b> <b>Cartridges</b> <b>耗材</b> <b>卡夹</b></p> <p>Opens the <b>Sample Calculation</b> dialog panel. 打开“<b>样本计算</b>”对话框面板。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Allows the user to edit the IDs of the selected position(s) on the rack grid. When the button is pressed, the <b>Manual Input</b> screen appears. 允许用户编辑管架格栅之内选中的位置的 ID。按下此按钮后，随即出现“<b>手动输入</b>”界面。</p>
	SP TIs	<p><b>Integrated Setup/Sample Preparation</b> <b>集成设置/样本制备</b></p> <p>Enables the user to change the tube type. 允许用户更改试管类型。</p>
	AS SP	<p><b>Overview</b> <b>概览</b></p> <p>Opens the <b>Sample View</b> screen. This screen displays information in a tabular format. 打开“<b>样本视图</b>”界面。此界面以表格的形式显示相关信息。</p>
	TIs	<p><b>User Management/User Overview</b> <b>用户管理/用户概览</b></p> <p>Saves changes. 保存更改。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Enables the user to enter a kit bar code. Press the field. You can enter a bar code in the screen that appears. 允许用户输入试剂盒条形码。点击相应字段，即可在出现的界面内输入条形码。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
		<p>Tls <b>File Transfer/Instr. Setup Files</b> <b>文件传输/仪器设置文件</b></p> <p>Enables upload/download of operator service scripts for the QIASymphony AS. 允许上传/下载 QIASymphony AS 的操作员服务脚本。</p>
		<p>Tls <b>File Transfer/Instr. Setup Files</b> <b>文件传输/仪器设置文件</b></p> <p>Enables upload/download of operator service scripts for the QIASymphony SP. 允许上传下载 QIASymphony SP 的操作员服务脚本。</p>
	SP IR	<p><b>Integrated Setup/Sample Preparation</b> <b>集成设置/样本制备</b></p> <p>Enables the user to select all samples. 允许用户选中所有样本。</p>
	SP	<p><b>Sample Preparation</b> <b>样本制备</b></p> <p>Selects all internal control positions. 选中所有内参位置。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Selects all positions. Only available when no position on the rack is selected. Otherwise, the <b>Deselect All</b> button is enabled. 选中所有位置。仅在无管架上的位置选中时可用。否则，“取消全选”按钮启用。</p>
		<p>Tls <b>Tools</b> <b>工具</b></p> <p>Opens the <b>Service AS</b> menu under which special service functions (e.g., for maintenance or instrument re-initialization) can be initiated. 打开“服务 AS”菜单，您可在此菜单下初始化专门的服务功能（例如，用于维护或仪器重新初始化的功能）。</p>
		<p>Tls <b>Tools/Sample Preparation</b> <b>工具/样本制备</b></p> <p>Opens the <b>Service SP</b> menu under which special service functions (e.g., for maintenance or instrument re-initialization) can be initiated. 打开“服务 SP”菜单，您可在此菜单下初始化专门的服务功能（例如，用于维护或仪器重新初始化的功能）。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS IR	<b>Assay Assignment</b> <b>检测分配</b> Opens the <b>Assay Specifications</b> screen. 打开“检测规格”界面。
		TIs <b>Tools</b> <b>工具</b> Starts the selected operator service script. 启动所选的操作员服务脚本。
	SP	<b>Sample Preparation</b> <b>样本制备</b> Stops the run. The <b>Stop</b> button appears if the current run is paused. 停止运行。如果当前的运行暂停，则会出现“停止”按钮。
		IR <b>Command bar</b> <b>命令栏</b> Stops the AS run. The <b>Stop AS</b> button appears if the current assay run is paused. 停止 AS 运行。如果当前的检测运行暂停，则会出现“停止”按钮。
		IR <b>Command bar</b> <b>命令栏</b> Stops the SP run. The <b>Stop SP</b> button appears if the current run is paused. 停止 SP 运行。如果当前的检测运行暂停，则会出现“停止”按钮。
	AS SP	<b>R&amp;C Drawer</b> <b>W Drawer</b> <b>E Drawer</b> <b>E &amp; R Drawer</b> <b>A Drawer</b> <b>R&amp;C 抽屉</b> <b>W 抽屉</b> <b>E 抽屉</b> <b>E &amp; R 抽屉</b> <b>A 抽屉</b> Stops the inventory scan of the “Eluate” drawer that is in progress, and then opens the previous screen. 停止正在进行的“洗脱物”抽屉库存扫描，然后打开前一界面。

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
<b>This week</b>		<p>Tls</p> <p>Rack browser/Sample Racks Rack browser/Eluate Racks Rack browser/Assay Rack <b>管架浏览器/样本管架</b> <b>管架浏览器/洗脱管架</b> <b>管架浏览器/检测管架</b></p> <p>Displays the rack files that have been modified since 00:00 of Monday of the current week, including the rack files that were modified today. This option is preselected by default. 显示本周一 00:00 之后修改的管架文件，包括今天修改的管架文件。默认情况下，此选项预先选中。</p>
<b>Today</b>		<p>Tls</p> <p>Rack browser/Sample Racks Rack browser/Eluate Racks Rack browser/Assay Rack <b>管架浏览器/样本管架</b> <b>管架浏览器/洗脱管架</b> <b>管架浏览器/检测管架</b></p> <p>Displays the rack files that were modified today. 显示今天修改的管架文件。</p>
<b>Tools</b>		<p>Tls</p> <p><b>Maintenance SP</b> <b>维护 SP</b></p> <p>Opens/returns to the <b>Tools</b> menu. 打开/返回“<b>工具</b>”菜单。</p>
<b>Transfer</b>	SP	<p>File transfer/Instr. Setup Files File transfer/Process Files File transfer/In-/Output Files <b>文件传输/仪器设置文件</b> <b>文件传输/处理文件</b> <b>文件传输/输入/输出文件</b></p> <p>Enables transfer of selected file types to the QIASymphony SP/AS or to the USB stick. 允许向 QIASymphony SP/AS 或 USB 盘传输选定类型的文件。</p>
<b>Tube Carrier</b>	SP	<p>Labware SP <b>器具 SP</b></p> <p>Opens the <b>Tube Carrier</b> screen. 打开“<b>试管托架</b>”界面。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
		<p>Tls <b>Instr. Setup Files</b> <b>仪器设置文件</b></p> <p>Saves information about all created users to a USB stick. Press to download the Assay Control Set file(s). 将所有创建的用户相关的信息保存到 USB 盘。点击下载检测对照集文件。</p>
		<p>Tls <b>Tools/Sample Preparation</b> <b>工具/样本制备</b></p> <p>Opens the <b>User Management</b> menu for managing users and passwords. 打开“<b>用户管理</b>”菜单，管理用户和密码。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Allows the user to edit the volume of the selected position(s) on the rack grid. 允许用户编辑管架格栅上选中位置的体积。</p>
	SP	<p><b>Sample Preparation</b> <b>样本制备</b></p> <p>Starts the <b>Wizard</b>. 启动“<b>向导</b>”。</p>
		<p>Tls <b>File Transfer/In-/Output Files</b> <b>文件传输/输入/输出文件</b></p> <p>Enables upload of work list(s). 允许上传工作列表。</p>
	AS	<p><b>Assay Setup</b> <b>检测构建</b></p> <p>Switches to the work list mode. If at least one work list is available for the samples and the screen is in the manual mode, the <b>Work Lists</b> button is active. 切换至工作列表模式。如果至少有一个工作列表可供样本使用，同时界面处于手动模式，则“<b>工作列表</b>”按钮激活。</p>
		<p>Tls <b>File Transfer/In-/Output Files</b> <b>文件传输/输入/输出文件</b></p> <p>Enables selected files to be synchronized when <b>Transfer</b> is pressed. 允许在按下“<b>传输</b>”按钮时同步选中的文件。</p>

Button 按钮	Availability 适用于	Menu option and description 菜单选项及描述
	AS	<b>Assay Setup</b> <b>检测构建</b> Enables the user to magnify the rack grid view to display additional information. 允许用户放大管架格栅视图，以便显示附加信息。
	AS	<b>Assay Setup</b> <b>检测构建</b> Enables the user to return to the normal view after zooming in. 允许用户在放大后返回到正常视图。



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## Appendix A

### 附录 A

Declaration of Conformity  
一致性声明

#### **Declaration of conformity — QIAsymphony SP** **一致性声明 — QIAsymphony SP**

Name and address of the company  
公司名称和地址

QIAGEN GmbH  
QIAGEN Strasse 1  
40724 Hilden  
Germany

#### **Declaration of conformity — QIAsymphony AS** **一致性声明 — QIAsymphony AS**

Name and address of the company  
公司名称和地址

QIAGEN GmbH  
QIAGEN Strasse 1  
40724 Hilden  
Germany

可向 QIAGEN 技术服务部索取最新的符合性声明。

## Waste Electrical and Electronic Equipment (WEEE) 报废电子电气设备(WEEE)

This section provides information about disposal of waste electrical and electronic equipment by users.

本章节介绍欧盟用户处理报废电子电气设备的有关信息。

The crossed-out wheeled bin symbol (see below) indicates that this product must not be disposed of with other waste; it must be taken to an approved treatment facility or to a designated collection point for recycling, according to local laws and regulations.

带叉号的轮式垃圾桶符号（如下图）表明该产品不可以与其他废弃物一起处置；必须由已批准的回收机构或指定的回收点进行回收，视当地法规而定。

The separate collection and recycling of waste electronic equipment at the time of disposal helps to conserve natural resources and ensures that the product is recycled in a manner that protects human health and the environment.

在处理时分类整理和回收废弃电子设备能节省自然资源，确保产品以保护人类健康和自然环境的方式进行回收。



Recycling can be provided by QIAGEN upon request at additional cost. In the European Union, in accordance with the specific WEEE recycling requirements and where a replacement product is being supplied by QIAGEN, free recycling of its WEEE-marked electronic equipment is provided.

在收取额外费用的前提下，QIAGEN 可应客户要求提供回收服务。在欧盟范围内，依照特定的 WEEE 回收要求，如果由 QIAGEN 提供替换产品，可免费回收标有 WEEE 的电子设备。

To recycle electronic equipment, contact your local QIAGEN sales office for the required return form. Once the form is submitted, you will be contacted by QIAGEN either to request follow-up

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information for scheduling collection of the electronic waste or to provide you with an individual quote.

如需回收电子设备，请联系当地的 QIAGEN 销售部门获得回收表格。表格一经提交，QIAGEN 将联系您索取随访信息并确定回收废弃电子设备的时间，或者为您提供回收报价。

## FCC declaration FCC 声明

The “United States Federal Communications Commission” (USFCC) (in 47 CFR 15. 105) declared that the users of this product must be informed of the following facts and circumstances. “United States Federal Communications Commission” 【美国联邦通信委员会】(USFCC) ( 47 CFR 15. 105) 声明该产品用户必须被告知以下事实和情况。

“This device complies with part 15 of the FCC:  
该仪器符合 FCC 第 15 部分要求：

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.”  
使用该仪器需遵循以下两项条件：（1）该仪器不可造成不良干扰，（2）该仪器必须接受其受到的任何干扰，包括会引起不正常运行的干扰。

“This Class A digital apparatus complies with Canadian ICES-0003.”  
该 A 类数字仪器符合加拿大 ICES-0003。

The following statement applies to the products covered in this consolidated operating guide, unless otherwise specified herein. The statement for other products will appear in the accompanying documentation.  
除非本文另有规定，以下声明适用于此手册中涵盖的产品。关于其他产品的声明见随附文件。

**Note:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.  
**注意：**该仪器经过测试符合 A 类数字设备限制，遵循 FCC 条例第 15 部分内容。这些限制旨在要求仪器在商业环境中使用时，可提供适当的保护，免除不良干扰。该仪器产生、使用、并能发射无线频率能量，如果没有按照操作手册进行安装和使用，可能会对无线通讯造成不良干扰。在住宅区内操作该仪器可能会造成不良干扰。此时，用户需要自费消除干扰。

QIAGEN GmbH Germany is not responsible for any radio television interference caused by unauthorized modifications of this equipment or the substitution or attachment of connection

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cables and equipment other than those specified by QIAGEN GmbH, Germany. The correction of interference caused by such unauthorized modification, substitution, or attachment will be the responsibility of the user.

QIAGEN GmbH (德国) 对由未经授权对仪器进行修改、替换或添加连接电缆及 QIAGEN GmbH (德国) 指定设备之外的设备造成的任何无线电视干扰不负有任何责任。由这些未经授权的修改、替换或添加附件所造成的干扰校准, 责任由用户承担。

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## Liability clause 责任条款

QIAGEN shall be released from all obligations under its warranty in the event repairs or modifications are made by persons other than its own personnel, except in cases where the Company has given its written consent to perform such repairs or modifications. QIAGEN 无义务保修除其自身工作人员之外人员进行的修理或改动，除非公司已书面同意进行这些修理或改动。

All materials replaced under this warranty will be warranted only for the duration of the original warranty period, and in no case beyond the original expiration date of original warranty unless authorized in writing by an officer of the Company. Read-out devices, interfacing devices, and associated software will be warranted only for the period offered by the original manufacturer of these products. Representations and warranties made by any person, including representatives of QIAGEN, which are inconsistent or in conflict with the conditions in this warranty shall not be binding upon the Company unless produced in writing and approved by an officer of QIAGEN.

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Droid Sans Fallback extension interface

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**文档修订历史记录**

R2 , 2017 年 12 月

与标准 61010 相关的更新已纳入用户手册中



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