QIAsymphony SP Protocol Sheet

resDNA1000_V3 protocol

General information

This protocol is for purification of nucleic acids from bioprocess purification buffers (e.g., buffers used in ion exchange chromatography or Protein A/G affinity chromatography) using the QIAsymphony® SP and the QIAsymphony Certal® Residual DNA Kit.

Note: It is the user's responsibility to validate performance using this combination for any procedures used in their laboratory.

Kit	QIAsymphony Certal Residual DNA Kit (cat. no. 931855)
Sample material	Biologics purified using chromatography procedures
Protocol name	resDNA1000_V3
Default Assay Control Set	ACS_resDNA1000_V3_default_IC
Editable	Eluate volume: 60 µl, 85 µl, 110 µl
Required software version	Version 4.0 or higher

"Sample" drawer

Sample type	Biologics purified using chromatography procedures
Sample volume	Depends on type of sample tube used; for more information see www.qiagen.com/goto/certal
Primary sample tubes	See www.qiagen.com/goto/certal for more information
Secondary sample tubes	See www.qiagen.com/goto/certal for more information
Inserts	Depends on type of sample tube used; for more information see www.qiagen.com/goto/certal
Other	Carrier RNA–Buffer AVE mix required; use of internal control is optional

November 2012

“Reagents and Consumables” drawer

Position A1 and/or A2	Reagent cartridge
Position B1	n/a
Tip rack holder 1–17	Disposable filter-tips, 200 µl
Tip rack holder 1–17	Disposable filter-tips, 1500 µl
Unit box holder 1–4	Unit boxes containing sample prep cartridges
Unit box holder 1–4	Unit boxes containing 8-Rod Covers

n/a = not applicable.

“Waste” drawer

Unit box holder 1–4	Empty unit boxes
Waste bag holder	Waste bag
Liquid waste bottle holder	Liquid waste bottle

“Eluate” drawer

Elution rack (we recommend using slot 1, cooling position)	See www.qiagen.com/goto/certal for more information

Required plasticware

	One batch, 24 samples*	Two batches, 48 samples*	Three batches, 72 samples*	Four batches, 96 samples*
Disposable filter-tips, 200 µl†‡	28	54	78	104
Disposable filter-tips, 1500 µl†‡	113	206	309	402
Sample prep cartridges§	18	42	63	72
8-Rod Covers¶	3	6	9	12

* Using more than one internal control per batch and performing more than one inventory scan requires additional disposable filter-tips. Using less than 24 samples per batch decreases the number of disposable filter-tips required per run.

† There are 32 filter-tips/tip rack.

‡ Number of required filter-tips includes filter-tips for 1 inventory scan per reagent cartridge.

§ There are 28 sample prep cartridges/unit box.

¶ There are twelve 8-Rod Covers/unit box.

Note: Numbers of filter-tips given may differ from the numbers displayed in the touchscreen depending on settings, for example, number of internal controls used per batch.

Selected elution volume

Selected elution volume (µl)**	Initial elution volume (µl)††
60	95
85	120
110	145

** The elution volume selected in the touchscreen. This is the minimum accessible volume of eluate in the final elution tube.

†† The initial volume of elution solution required to ensure that the actual volume of eluate is the same as the selected volume.

Preparation of internal control–carrier RNA–Buffer AVE mixture

Selected elution volume (µl)	Volume stock carrier RNA (µl)	Volume internal control (µl)*	Volume Buffer AVE (µl)	Final volume per sample (µl)
60	5	9	106	120
85	5	11.5	103.5	120
110	5	13.5	101.5	120

* The calculation of the amount of internal control is based on the initial elution volumes. Additional void volume depends on the type of sample tube used; see www.qiagen.com/goto/certal for more information.

Note: The values displayed in the table are for preparation of internal control–carrier RNA mixture for a downstream assay that requires 0.1 µl internal control/µl eluate.

Tubes containing internal control–carrier RNA–Buffer AVE mixture are placed in a tube carrier. The tube carrier containing the internal control–carrier RNA–Buffer AVE mixture(s) must be placed in slot A of the sample drawer.

Depending on the number of samples to be processed, we recommend using 2 ml tubes (Sarstedt®, cat. no. 72.693 or 72.694) or 14 ml 17 x 100 mm polystyrene, round-bottom tubes (Becton Dickinson, cat. no. 352051) for diluting the internal control, as described in the table on page 5. It is possible to split the volume into 2 or more tubes.

Calculating the volume of internal control mixture

Tube type	Name on QIAsymphony touchscreen	Calculation of internal control–carrier RNA–Buffer AVE mixture volume per tube
Microtube 2 ml with cap; microtube 2 ml, PP, SKIRTED, (Sarstedt, cat. no. 72.694)	SAR#72.694 T2.0 ScrewSkirt	(n x 120 µl) + 360 µl*
Microtube 2 ml with cap; microtube 2 ml, PP, NON-SKIRTED, (Sarstedt, cat. no. 72.693)	SAR#72.693 T2.0 Screw	(n x 120 µl) + 360 µl*
Tube 14 ml, 17 x 100 mm polystyrene round-bottom (Becton Dickinson, cat. no. 352051)	BD#352051 FalconPP 17x100	(n x 120 µl) + 600 µl†

* Use this equation to calculate the required volume of internal control mixture (n = number of samples; 120 µl = volume of internal control–carrier RNA–Buffer AVE mixture; 360 µl = void volume required per tube). For example, for 12 samples (n = 12): (12 x 120 µl) + 360 µl = 1800 µl. Do not fill the tube with more than 1.9 ml (i.e., a maximum of 12 samples per tube). If more than 12 samples will be processed, use additional tubes, ensuring that the void volume is added per tube.

† Use this equation to calculate the required volume of internal control–carrier RNA–Buffer AVE mixture (n = number of samples; 120 µl = volume of internal control–carrier RNA–Buffer AVE mixture; 600 µl = void volume required per tube). For example, for 96 samples (n = 96): (96 x 120 µl) + 600 µl = 12,120 µl.

See www.qiagen.com/goto/certal for required inserts.

Using FIX labware

Using liquid-level detection (LLD) for sample transfer allows the use of primary and secondary tubes. However, this requires certain dead volumes in the respective tubes. In order to minimize dead volumes, secondary tubes should be used without liquid-level detection. Specific FIX labware is available (e.g., SAR_FIX_#72.694 T2.0 ScrewSkirt) which can also be selected on the touchscreen of the QIAsymphony SP. This tube/rack type imposes aspiration restrictions. The sample is aspirated at a particular height in the tube that is defined by the volume of sample to be transferred. Therefore, it is essential to make sure that the volume listed in the labware list is used. Labware lists are available for download from www.qiagen.com/goto/certal.

Sample tubes that can be used with or without liquid-level detection and required sample volumes are listed at www.qiagen.com/goto/certal. Do not use volumes greater or lower than the required volume since this may lead to errors during sample preparation.

Tubes for use with liquid-level detection and tubes that are not for liquid-level detection can be processed within one batch/run.

Preparation of sample material

When working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles. For more information, consult the appropriate safety data sheets (SDSs), available from the product supplier.

Biologics purified using chromatography procedures

Samples from bioprocess purification buffers (e.g., buffers used in ion exchange chromatography or Protein A/G affinity chromatography) need a pre-conditioning step with Buffer CA.

Dilute the untreated sample 1:1 with Buffer CA. Samples with a volume of 500 µl are pre-conditioned with 500 µl Buffer CA. Transfer treated samples to a 2 ml Sarstedt tube and place the tubes with treated sample into the tube carrier.

For up-to-date licensing information and product-specific disclaimers, see the respective QIAGEN kit handbook or user manual. QIAGEN kit handbooks and user manuals are available at www.qiagen.com or can be requested from QIAGEN Technical Services or your local distributor.

www.qiagen.com
Australia ■ 1-800-243-800
Austria ■ 0800/281010
Belgium ■ 0800-79612
Canada ■ 800-572-9613
China ■ 021-51345678
Denmark ■ 80-885945
Finland ■ 0800-914416
France ■ 01-60-920-930
Germany ■ 02103-29-12000
Hong Kong ■ 800 933 965
Ireland ■ 1800 555 049
Italy ■ 800 787980
Japan ■ 03-5547-0811
Korea (South) ■ 1544 7145
Luxembourg ■ 8002 2076
The Netherlands ■ 0800 0229592
Norway ■ 800-18859
Singapore ■ 65-67775366
Spain ■ 91-630-7050
Sweden ■ 020-790282
Switzerland ■ 055-254-22-11
UK ■ 0808-234-3665
USA ■ 800-426-8157