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QIAsymphony® File Transfer User Guide

For automatic file transfer and file-based interfaces of the QIAsymphony SP/AS

Sample & Assay Technologies

QIAGEN Sample and Assay Technologies

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Introduction

This document describes how to connect QIAsymphony SP/AS instruments (software version 4.0) to a network and how to set up automatic file transfer, so that files are automatically transferred to a predefined directory. This data transfer enables management of samples, test results, users, and standards, and can be useful for other laboratory functions (e.g., invoicing). Detailed descriptions of result files, work list files, and rack files can be found on pages 10–108. Those detailed descriptions also indicate which items have changed between QIAsymphony software versions 3.5 and 4.0. In order to obtain detailed information about the differences in each item, see section "Differences between QIAsymphony software versions 3.5 and 4.0", page 109. Files (i.e., result files, rack files, and work list files) can be transferred to and from the QIAsymphony SP/AS instruments in ***.xml** format, enabling data exchange with external computer systems (Table 1). QIAsymphony SP/AS instruments also generate result files in ***.html** format, which is easier to read. In addition, the handheld bar code reader can be used to scan and transfer information from bar codes to the QIAsymphony SP/AS instruments.

Table 1. Files that can be transferred to/from QIAsymphony SP/AS instruments in *.xml format

Input files	Output files
■ Work lists ■ Rack files (QIAsymphony SP) ■ Rack files (QIAsymphony AS)	■ Result files (QIAsymphony SP) ■ Result files (QIAsymphony AS) ■ Rack files (QIAsymphony SP) ■ Rack files (QIAsymphony AS) ■ Start batch confirmation files (QIAsymphony SP) ■ Loading Information (QIAsymphony AS)

Note: ***.xml** files provided by QIAGEN are digitally signed with a checksum, providing data integrity. The checksum can be verified using the checksum validator tool in the QIAsymphony Management Console. Alternatively, user-generated input ***.xml** files can be used, but these are not signed with a checksum.

The "QIAGEN File Transfer" service in the QIAsymphony Management Console periodically checks the configured QIAsymphony SP/AS instruments for new result files, start batch confirmation, loading information, and cycler files. New files are then transferred to a predefined directory. In the same way, the "QIAGEN File Transfer" service periodically checks predefined directories for new work lists. New files are then transferred to the corresponding QIAsymphony SP/AS instruments. See "Auto Transfer Tool" in the *QIAsymphony Management Console User Manual* for more details.

Configuring the "Auto Transfer" Tool

The "Auto Transfer" tool can be configured using local folders (page 7) or network folders (page 8).

Before starting, you must connect the QIAsymphony SP/AS instruments to the local network and install the QIAsymphony Management Console as follows:

1. **Connect the QIAsymphony SP/AS instruments to the local network.**

   The QIAsymphony SP/AS instruments can be connected to the local network in different modes using a DHCP and a static IP address. Contact your IT department to obtain the appropriate mode for introducing new nodes into your local network.

   Note: QIAGEN Field Service will configure the network parameters for your QIAsymphony SP/AS instruments.

2. **Install the QIAsymphony Management Console on your PC.**

   See "Installing the QIAsymphony Management Console" in the *QIAsymphony Management Console User Manual* for the minimum PC requirements and more details about how to do this.

   The QIAsymphony Management Console must be installed on a Microsoft® Windows® PC. This PC must have access to network drives. You may need to ask your local IT department for access to network drives.

3. **Configure the root directory for automatic file transfer.**

   If you are using local folders, see the "Using local folders" section (page 7) and if you are using network folders, see the "Using network folders" section (page 8).

Using local folders

1. **Configure the root directory for automatic file transfer.**

   The root directory for automatic file transfer is a directory on your local PC or network (local path) in which the transferred rack, result, loading information, and cycler files are saved. The root directory can be configured in the "Root Directory" panel of the "Auto Transfer" tab in the "Options" dialog box. See "Configuring the QIAsymphony Management Console" in the *QIAsymphony Management Console User Manual*.

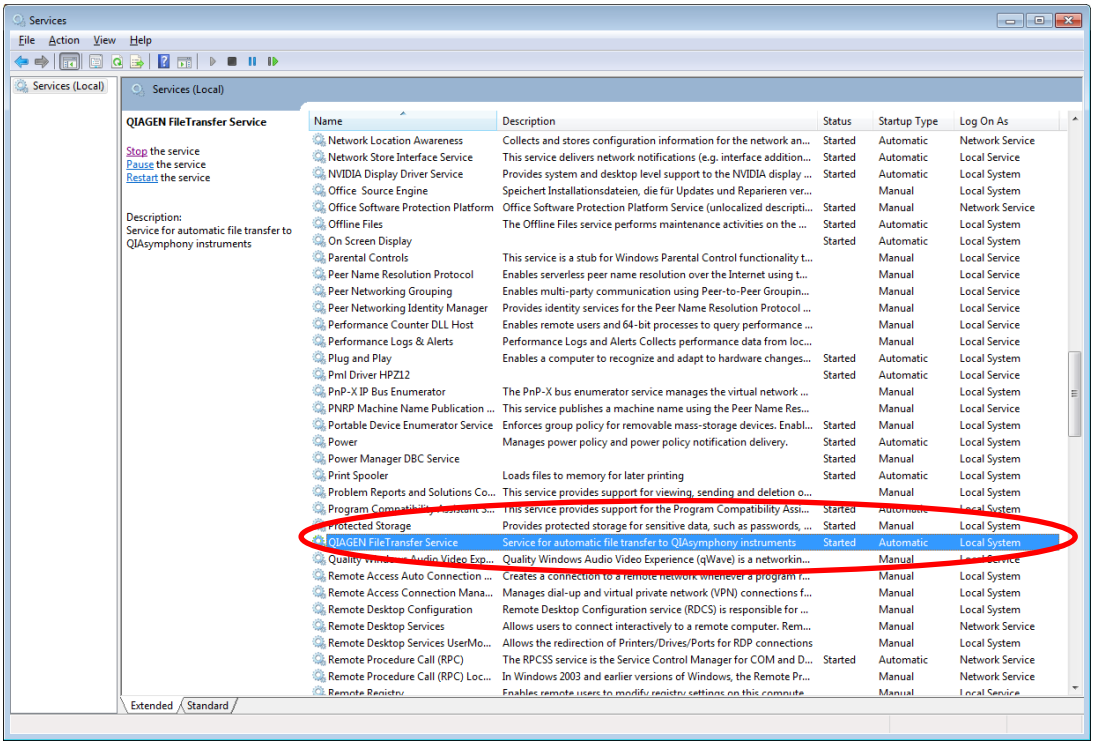
2. **Launch the "Auto Transfer" tool by selecting the corresponding icon in the tools list.**
3. **Configure the parameters for the instrument from which the files should be automatically transferred. Enter the host name, port, and the corresponding password for the "FileTransfer" user. Then click "Add".**
4. **Click "Start". This will save the configuration to the configured root directory and start the QIAGEN File Transfer Service.**

Using network folders

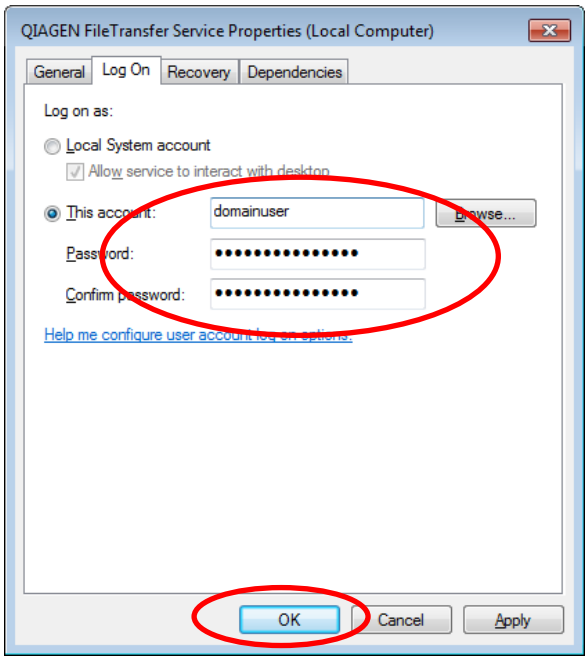
1. **Ask your Windows domain administrator (e.g., your local IT department) to create a Windows domain user account.**

   This user account must be configured so that this domain user has full access to the network folders.

2. **Select "Start/Settings/Control Panel/Administrative Tools/Services".**
3. **Double-click "QIAGEN File Transfer Service". The "QIAGEN File Transfer Service Properties" dialog box will appear.**



4. **Select the "Log On" tab and log in by selecting the account and entering the password. Click "OK".**



5. **Configure the root directory for automatic file transfer.**

   The network folder cannot be accessed using the letter of a mapped drive (e.g., Z:\\). The full name of the drive must be used (e.g., \\<server>\<shared_folder>\<subpath>) and either specified manually or selected from the network environment.

6. **Launch the "Auto Transfer" tool by selecting the corresponding icon in the tools list.**
7. **Configure the parameters for the instrument from which the files should be automatically transferred. Enter the host name, port, and the corresponding password for the "FileTransfer" user. Then click "Add".**

Managing the "QIAGEN File Transfer" service

After changing the root directory for the "Auto Transfer" tool, the "QIAGEN File Transfer" service must be stopped and restarted. See "Stopping and restarting the "QIAGEN File Transfer" service" in the *QIAsymphony Management Console User Manual* for more details.

Description of QIAsymphony files

The following sections describe the QIAsymphony file types relevant for laboratory information management system (LIMS) integration. Each file type is described by a set of tables and examples.

Each table lists one element per row. For complex elements that contain other XML elements, the level in the XML hierarchy is indicated by the column labeled "Level".

The differences between software version 3.5 and 4.0 are shown in the tables as follows:

- "(updates)" indicates elements or parameters that have been updated between software version 3.5 and 4.0
- "(new)" indicates elements or parameters that are new to software version 4.0.

Detailed information about the divergences can be found in the section "Differences between QIAsymphony software versions 3.5 and 4.0", page 109. Elements deleted from version 4.0 are also listed.

QIAsymphony SP Result File

A QIAsymphony SP result file in ***.xml** format can consist of several elements, which vary depending on the run/batch. "FullPlateTrack" is the root element that contains all other elements of the result file. Each element consists of parameters that provide information about a particular feature of a run on the QIAsymphony SP (Table 2). Example 1 shows a complete result file for a run in which one batch with one sample was processed. The following sections describe each element in more detail.

Table 2. Description of QIAsymphony SP result file elements

Element	Level	Description
FullPlateTrack	Root element	Provides all information associated with an elution rack for a particular run. This includes information about batches that were eluted into this elution rack, and all reagents that were used for processing these batches.
BatchTrack	1	Provides all information about a batch that was eluted into the elution rack. If more than one batch was eluted into the elution rack, there will be a corresponding number of "BatchTrack" elements.
Worklists	2	Provides a list of all the work lists that were used for this particular batch.
SampleTrack	2	Provides all information associated with a particular sample in a batch. There is a "SampleTrack" element for each sample in the batch that was eluted into the elution rack.
LiquidTrack	3	Provides all information about liquid transfers associated with samples.
SampleStateItem	3	Provides information about changes in sample status during sample processing. If the sample status is "valid", this element is not included.
Message	2	Provides details of messages associated with a particular batch. Each "Message" element contains information about a single message. Messages are created when a run is paused, completed, or cancelled.
ProcessStepResult (updated)	2	Describes the status of the lysis and eluate temperatures during processing of a particular batch.
AssaySetTrack	2	Provides information about the Assay Control Set that was used to process a particular batch.

Table continued on next page.

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Element	Level	Description
ICPositionInfo	3	Provides information about an internal control that was used with a particular Assay Control Set.
ProcessStepResult (updated)	1	Contains information about the process step (Lysis Temperature, Shaker Speed, Eluate Temperature) and the result.
ReagentRackTrack	1	Provides all information about a reagent rack and associated reagents for a particular run. A reagent rack can be a reagent cartridge, buffer bottle, or accessory trough.
ReagentTrack	2	Provides information about reagents in a particular reagent rack. There is a "ReagentRack" element for each reagent in the reagent rack. Buffer bottles and accessory troughs hold just one reagent, resulting in one "ReagentRack" element, but a reagent cartridge holds more than one reagent, resulting in more than one "ReagentRack element".

Example 1. QIAsymphony SP result file in *.xml format

```
<?xml version="1.0" encoding="UTF-8"?>
<FullPlateTrack Type="Object" Class ="FullPlateTrack">
 <PlateID Type="String">_E1_100911114724</PlateID>
 <RackType Type="String">GR#650161 *MTP96 RB</RackType>
 <SlotNo Type="UInt">1</SlotNo>
 <LoadingTime Type="DateTime">20111129 11:34:18.210</LoadingTime>
 <LoadedByOperator Type="String">Operator</LoadedByOperator>
 <RemoveTime Type="DateTime">20111129 11:39:24.615</RemoveTime>
 <RemovedByOperator Type="String">Operator</RemovedByOperator>
 <StartOfFirstBatch Type="DateTime">20111129 11:34:45.243</StartOfFirstBatch>
 <EndOfLastBatch Type="DateTime">20111129 11:38:51.675</EndOfLastBatch>
 <Instrument Type="String">xnap000</Instrument>
 <SoftwareVersion Type="String">4.0.0 (development)</SoftwareVersion>
 <ProcessConfigurationProfile Type="String">None</ProcessConfigurationProfile>
 <Filename
Type="String">c:/Dev/xNASoftware/4_BRA/log/Results/SP/20111129113924__E1_100911114724.xml</Filename>
 <EluateCooling Type="Bool">0</EluateCooling>
 <AverageEluateTemperature Type="Int">0</AverageEluateTemperature>
 <AllSamplesOK Type="String">passed</AllSamplesOK>
 <BatchTrack Type="Object" Class ="BatchTrack">
  <ScriptName Type="String">BS_Virus_1000</ScriptName>
  <ScriptVersion Type="String">1.00</ScriptVersion>
  <BatchID Type="UInt">2000678</BatchID>
  <Operator Type="String">Operator</Operator>
  <StartedByOperator Type="String">Operator</StartedByOperator>
  <OrderingTime Type="DateTime">20111129 11:34:41.315</OrderingTime>
  <StartOfRun Type="DateTime">20111129 11:34:45.243</StartOfRun>
  <EndOfRun Type="DateTime">20111129 11:35:01.491</EndOfRun>
  <IsPlateMode Type="Bool">0</IsPlateMode>
  <SampleRackNo Type="UInt">1</SampleRackNo>
  <EluateRackID Type="String">_E1_100911114724</EluateRackID>
  <SampleRackID Type="String">T0100141</SampleRackID>
  <SampleRackType Type="String">PTHO Carrier</SampleRackType>
  <EluateSlotNo Type="UInt">1</EluateSlotNo>
  <AllSamplesOK Type="String">passed</AllSamplesOK>
  <NeedsEluateCooling Type="Bool">0</NeedsEluateCooling>
  <IvD Type="Bool">0</IvD>
  <DisplayEluateVolumeOnScreen Type="String">EluateVolume</DisplayEluateVolumeOnScreen>
  <DisplayEluateVolumeInResultFile Type="String">EluateVolume</DisplayEluateVolumeInResultFile>
  <DisplayBufferVolumeInResultFile Type="Bool">0</DisplayBufferVolumeInResultFile>
  <Worklists Type="Object" Class ="Worklists">
  </Worklists>
  <SampleTrack Type="Object" Class ="SampleTrack">
   <SampleOutputVolume Type="CVolume">50.0</SampleOutputVolume>
   <SampleCode Type="String">2000</SampleCode>
   <SamplePosition Type="String">1</SamplePosition>
   <AssaySet Type="String">Virus 1000</AssaySet>
   <Worklist Type="String"></Worklist>
   <AspirationMode Type="String">P</AspirationMode>
   <ICAspirationMode Type="String">C</ICAspirationMode>
   <ICPosition Type="String">2</ICPosition>
   <SampleOutputPos Type="String">A:1</SampleOutputPos>
   <Labware Type="String">BD#352051 FalconPP 17x100</Labware>
   <ManuallyEdited Type="Bool">0</ManuallyEdited>
   <SampleIdManuallyEdited Type="Bool">0</SampleIdManuallyEdited>
   <LabwareManualEdited Type="Bool">0</LabwareManualEdited>
   <LiquidTrack Type="Object" Class ="LiquidTrack">
```

```
  <Quantity Type="Double">379.977733162986</Quantity>
  <Time Type="DateTime">20111129 11:34:48.378</Time>
  <Type Type="String">TOPE</Type>
  <InternalControl Type="Bool">0</InternalControl>
  <ReagentRackNo Type="Int">101</ReagentRackNo>
  <ReagentSourceType Type="String">Unknown</ReagentSourceType>
 </LiquidTrack>
 <LiquidTrack Type="Object" Class ="LiquidTrack">
  <Quantity Type="Double">379.977733162986</Quantity>
  <Time Type="DateTime">20111129 11:34:55.037</Time>
  <Type Type="String">QSW5</Type>
  <InternalControl Type="Bool">0</InternalControl>
  <ReagentRackNo Type="Int">1</ReagentRackNo>
  <ReagentSourceType Type="String">Reagentbox</ReagentSourceType>
 </LiquidTrack>
 <Message Type="String">
      2011-11-29 11:35:01 INFO 30603 : SP: [BATCH:2000678] [SAMPLE:] [COMMAND:] -
      Batch state changed, batch finished
 </Message>
 <SampleState Type="String">valid</SampleState>
 <SampleType Type="String">Sample</SampleType>
 <ReagentRacks Type="String">1,BufferBottle-1</ReagentRacks>
 <EnzymeReagentRacks Type="String"></EnzymeReagentRacks>
 <MinElutionVol Type="CVolume">0.0</MinElutionVol>
 <BufferVolume Type="CVolume">51.0</BufferVolume>
</SampleTrack>
<SampleTrack Type="Object" Class ="SampleTrack">
    …
</SampleTrack>
<SampleTrack Type="Object" Class ="SampleTrack">
    …
</SampleTrack>
<Message Type="Object" Class ="ProcEventEssentials">
 <MessageId Type="Int">30603</MessageId>
 <MessageText Type="String">Batch state changed, batch finished</MessageText>
 <Timestamp Type="DateTime">20111129 11:35:01.523</Timestamp>
 <CommandName Type="String"></CommandName>
 <Operator Type="String"></Operator>
 <SampleId Type="String"></SampleId>
 <SamplePosition Type="String"></SamplePosition>
</Message>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
 <ProcessStep Type="String">Lysis Temperature</ProcessStep>
 <Result Type="String">not required</Result>
</ProcessStepResult>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
   …
</ProcessStepResult>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
   …
</ProcessStepResult>
<AssaySetTrack Type="Object" Class ="AssaySetTrack">
 <Name Type="String">Virus 1000</Name>
 <ACSAuthentic Type="String">0</ACSAuthentic>
 <ICName Type="String">Internal Control 1</ICName>
 <ICBarcode Type="String">1111</ICBarcode>
</AssaySetTrack>
</BatchTrack>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
 <ProcessStep Type="String">Lysis Temperature</ProcessStep>
```

```
 <Result Type="String">not required</Result>
</ProcessStepResult>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
   …
</ProcessStepResult>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
   …
</ProcessStepResult>
<ReagentRackTrack Type="Object" Class ="ReagentRackTrack">
 <ReagentRackLabel Type="String">Reagent rack number</ReagentRackLabel>
 <Id Type="String">807002511212345671112123456 72</Id>
 <IdentNo Type="String">8090045</IdentNo>
 <LogicalName Type="String"></LogicalName>
 <LastSlotName Type="String">Reagentbox-2</LastSlotName>
 <AllSlotNames Type="String">Reagentbox-2</AllSlotNames>
 <Lot Type="String">1121234567</Lot>
 <Name Type="String">QIAsymphony DSP Virus/Pathogen Midi Kit, catalog no. 937055</Name>
 <InternalNo Type="Int">1</InternalNo>
 <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
 <BeadwellId Type="String">8070025</BeadwellId>
 <BeadwellLotId Type="String">1121234567</BeadwellLotId>
 <EnzymRackId Type="String">8070025</EnzymRackId>
 <EnzymRackLotId Type="String">1121234567</EnzymRackLotId>
 <Homogeneity Type="String">passed</Homogeneity>
 <ReagentTrack Type="Object" Class ="ReagentTrack">
  <Id Type="String">QSL2</Id>
  <Position Type="Int">1</Position>
  <Lot Type="String">1121234567-1</Lot>
  <Volume Type="Double">43000</Volume>
  <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
  <Expired Type="Bool">0</Expired>
 </ReagentTrack>
 <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
 </ReagentTrack>
</ReagentRackTrack>
<ReagentRackTrack Type="Object" Class ="ReagentRackTrack">
   …
</ReagentRackTrack>
  <InternalControlTrack Type="Object" Class ="InternalControlTrack">
    <ICName Type="String">Barcode_1021</ICName>
    <ICBarcode Type="String">1021</ICBarcode>
    <ICTubeInfo Type="Object" Class ="ICTubeInfo">
      <ICTubePosition Type="String">3</ICTubePosition>
      <ICTubeLabware Type="String">BD#352051 FalconPP 17x100</ICTubeLabware>
    </ICTubeInfo>
    <ICTubeInfo Type="Object" Class ="ICTubeInfo">
      …
    </ICTubeInfo>
    <AssayControlSetName Type="String">Virus 1000</AssayControlSetName>
  </InternalControlTrack>
</FullPlateTrack>

<!-- QIAsymphony_CHECKSUM BQtqmXNN33XyJKHgiQ2ykyVC8jAOb4CDt+4aQ/FigLA=-->
```

Table 3. QIAsymphony SP result file root element

Element	Dimension	Range	Description
FullPlateTrack	–	–	Result files contain exactly one top-level element <FullPlateTrack> that contains all information of the result file. The element's name stems from the fact, that a result file describes exactly one eluate plate.
Type	String	Object (fixed)	Required attribute of the top-level <FullPlateTrack> element.
Class	String	FullPlateTrack	Required attribute of the top-level <FullPlateTrack> element.

FullPlate Track

The FullPlateTrack element provides all information associated with an elution rack for a particular run. This includes information about batches that were eluted into this elution rack, and all reagents that were used for processing these batches.

Table 4. Description of FullPlateTrack parameters

Element	Dimension	Range	Description
PlateID	String	(not empty)	ID of the eluate rack described by the result file. This can be its bar code, a user-defined ID, or an ID generated by the device.
RackType	String	(not empty)	Type of the eluate rack described by this result file.
SlotNo	UInt	[1–4]	Slot number of the eluate drawer that the eluate rack is placed on.
LoadingTime	DateTime	–	Time that the eluate rack was placed on the device.
LoadedByOperator	String	(not empty)	ID of the user who loaded the rack.
RemoveTime	DateTime	–	Time that the eluate rack was removed from the device.
RemovedByOperator	String	(not empty)	ID of the user who removed the rack.
StartofFirstBatch	DateTime	–	Time stamp the first batch of the run was started.
EndofLastBatch	DateTime	–	Time the last batch finished (by completion or cancellation).
Instrument	String	(not empty)	Serial number of the device used to process the eluates.
SoftwareVersion	String	(not empty)	Software version that created the result file. A string of the form X.Y.Z where X, Y, and Z denote the major version, minor version, and the revision number, e.g., “3.1.2”.

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Element	Dimension	Range	Description
Process Configuration Profile	String	None | (name of a process configuration profile)	ID of the process configuration profile used to generate the current configuration. For manual changes to a profile without saving, the documented ID is “None”.
Filename	String	(not empty)	Name of the result file, (includes full path).
EluateCooling	Bool	[1,0]	Not used.
AverageEluate Temperature	Int	–	Average eluate temperature during the cooling period.
AllSamplesOK (updated)	String	[passed, failed, unclear]	“Passed” if all samples that are documented in this result file are "valid". “Failed” if at least one sample is “invalid”. “Unclear” if at least one sample is “unclear” and neither is “invalid”.
BatchTrack	Object	–	One BatchTrack exists for each batch that used the eluate plate. See “BatchTrack”, page 20.
ProcessStep Result	Object	–	See “BatchTrack/ ProcessStepResult”, page 20.

Table continued on next page.

Table continued from previous page.

Element	Dimension	Range	Description
ProcessStep Result	Object	–	See “BatchTrack/ ProcessStepResult”, page 20.
ReagentRack Track	Object	–	One ReagentRackTrack per reagent rack. A reagent rack is a reagent box, a buffer bottle, or an accessory trough. See “ReagentRackTrack”, page 35.
InternalControlTrack	Object	–	One InternalControlTrack per IC. See “InternalControlTrack”, page 42.
Message (new)	–	–	Important messages and events during the run.

BatchTrack

A “BatchTrack” element provides all information about a batch that was eluted into the elution rack. If more than one batch was eluted into the elution rack, there will be a corresponding number of “BatchTrack” elements.

Example 2. BatchTrack element in *.xml format

```
<BatchTrack Type="Object" Class ="BatchTrack">
 <ScriptName Type="String">BS_Virus_1000</ScriptName>
 <ScriptVersion Type="String">1.00</ScriptVersion>
 <BatchID Type="UInt">2000678</BatchID>
 <Operator Type="String">Operator</Operator>
 <StartedByOperator Type="String">Operator</StartedByOperator>
 <OrderingTime Type="DateTime">20111129 11:34:41.315</OrderingTime>
 <StartOfRun Type="DateTime">20111129 11:34:45.243</StartOfRun>
 <EndOfRun Type="DateTime">20111129 11:35:01.491</EndOfRun>
 <IsPlateMode Type="Bool">0</IsPlateMode>
 <SampleRackNo Type="UInt">1</SampleRackNo>
 <EluateRackID Type="String">_E1_100911114724</EluateRackID>
 <SampleRackID Type="String">T0100141</SampleRackID>
 <SampleRackType Type="String">PTHO Carrier</SampleRackType>
 <EluateSlotNo Type="UInt">1</EluateSlotNo>
 <AllSamplesOK Type="String">passed</AllSamplesOK>
 <NeedsEluateCooling Type="Bool">0</NeedsEluateCooling>
 <IvD Type="Bool">0</IvD>
 <DisplayEluateVolumeOnScreen Type="String">EluateVolume</DisplayEluateVolumeOnScreen>
 <DisplayEluateVolumeInResultFile Type="String">EluateVolume</DisplayEluateVolumeInResultFile>
 <DisplayBufferVolumeInResultFile Type="Bool">0</DisplayBufferVolumeInResultFile>
 <Worklists Type="Object" Class ="Worklists">
 </Worklists>
 <SampleTrack Type="Object" Class ="SampleTrack">
  ...
 </SampleTrack>
 <Message Type="Object" Class ="ProcEventEssentials">
  ...
 </Message>
 <ProcessStepResult Type="Object" Class ="ProcessStepResult">
  ...
 </ProcessStepResult>
 <AssaySetTrack Type="Object" Class ="AssaySetTrack">
  ...
 </AssaySetTrack>
</BatchTrack>
```

Table 5. Description of BatchTrack parameters

Element	Dimension	Range	Description
ScriptName	String	(not empty)	Name of the script (protocol) related to the entire batch (i.e., to all samples). Taken from the tag ScriptName of the ***.xml** file of the protocol.
ScriptVersion (updated)	String		Script version of the protocol. May be empty if the script version in the protocol is empty.
BatchID	UInt	(>1000000)	Batch ID.
Operator	String	(not empty)	User ID for whoever set up the batch.
StartedByOperator	String	(not empty)	User ID for whoever started the run.
OrderingTime	DateTime	–	Time the batch was queued (i.e., set up is finished).
StartOfRun	DateTime	–	Time batch processing was started.
EndOfRun	DateTime	–	Time batch processing was finished (by completion or cancellation).
IsPlateMode	Bool	[1, 0]	"1" if plate carriers were used for samples. "0" if tube carriers were used for samples.
SampleRackNo	UInt	[1–4] tube carrier [6–9] plate carrier	Slot of the sample rack; 1–4 if a tube carrier was used; 6–9 if a plate carrier was used.

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Element	Dimension	Range	Description
EluateRackID	String	(not empty)	ID of the eluate rack containing the eluate of this batch. Same value as FullPlateTrack/ PlateID.
SampleRackID	String	Depends on SampleRackType	Empty in case of tube carrier; in case of rack carrier, the sample rack ID is given.
SampleRackType	String	[PTHO Carrier, (not empty)]	Tube for tube carrier. For rack carriers, the chosen rack type is given.
EluateSlotNo	UInt	[1–4]	Number of the slot on the eluate drawer where the eluate rack of the batch is placed. Same value as FullPlateTrack/ SlotNo.
AllSamplesOK (updated)	String	[passed, failed, unclear]	"Passed" if all samples in the result file are valid. "Failed" if at least one sample is invalid. "Unclear" if at least one sample is unclear and neither is invalid.
NeedsEluateCooling	Bool	[1, 0]	"1" if the script uses eluate cooling functionality. "0" if the script does not use eluate cooling.

Table continued on next page.

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Element	Dimension	Range	Description
IvD	Bool	[1, 0]	Not used.
DisplayEluate VolumeOnScreen	String	EluateVolume | MinElutionVol	Specifies which volume to print bold in the HTML result file.
DisplayEluate VolumeInResultFile	String	EluateVolume | MinElutionVol | Both	Specifies whether to show the elution volume, the minimal eluate volume in elution labware at the time of eluate transfer, or both, respectively, in the HTML result file.
DisplayBuffer VolumeInResultFile	Bool	[1, 0]	Specifies whether to show the volume for transferring elution buffer into sample prep cartridges in the HTML result file.
Worklists	Object	–	A list of work lists that were used for ordering the batch. See "Worklists", page 24.
SampleTrack	Object	–	1–24 samples that were processed in the batch. See "SampleTrack", page 24.
Message	Object	–	One or more messages regarding the status of the batch. See "Message" (page 31)

Table continued on next page.

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Element	Dimension	Range	Description
ProcessStepResult	Object	–	3 elements: Contains temperature supervision information for lysis or eluate cooling. The element for shaker speed is unused. See “ProcessStepResult”, page 33.
AssaySetTrack	Object	–	One or more elements containing information about the ACS that were used in the batch. See “AssaySetTrack”, page 34.

Worklists

The “Worklists” element provides a list of all work lists that were used for a particular batch.

Example 3. Worklists element in *.xml format

```
<Worklists Type="Object" Class ="Worklists">
  <Worklist Type="String">Worklist_MoveConveyor1</Worklist>
  <Worklist Type="String">Worklist_MoveConveyor2</Worklist>
</Worklists>
```

Table 6. Description of Worklists parameters

Parameter	Dimension	Range	Description
Worklists	String	(not empty)	The name of the worklist that was used during batch ordering.

SampleTrack

A “SampleTrack” element provides all information associated with a particular sample in a batch. There is a “SampleTrack” element for each sample in a batch that was eluted into the elution rack.

Example 4. SampleTrack element in *.xml format

```
<SampleTrack Type="Object" Class ="SampleTrack">
  <SampleOutputVolume Type="CVolume">50.0</SampleOutputVolume>
  <SampleCode Type="String">2000</SampleCode>
  <SamplePosition Type="String">1</SamplePosition>
  <AssaySet Type="String">Virus 1000</AssaySet>
  <Worklist Type="String"></Worklist>
  <AspirationMode Type="String">P</AspirationMode>
  <ICAspirationMode Type="String">C</ICAspirationMode>
  <ICPosition Type="String">2</ICPosition>
  <SampleOutputPos Type="String">A:1</SampleOutputPos>
  <Labware Type="String">BD#352051 FalconPP 17x100</Labware>
  <ManuallyEdited Type="Bool">0</ManuallyEdited>
  <SampleIdManuallyEdited Type="Bool">0</SampleIdManuallyEdited>
  <LabwareManualEdited Type="Bool">0</LabwareManualEdited>
  <LiquidTrack Type="Object" Class ="LiquidTrack">
    <Quantity Type="Double">379.977733162986</Quantity>
    <Time Type="DateTime">20111129 11:34:48.378</Time>
    <Type Type="String">TOPE</Type>
    <InternalControl Type="Bool">0</InternalControl>
    <ReagentRackNo Type="Int">101</ReagentRackNo>
    <ReagentSourceType Type="String">Unknown</ReagentSourceType>
  </LiquidTrack>
  <LiquidTrack Type="Object" Class ="LiquidTrack">
    <Quantity Type="Double">379.977733162986</Quantity>
    <Time Type="DateTime">20111129 11:34:55.037</Time>
    <Type Type="String">QSW5</Type>
    <InternalControl Type="Bool">0</InternalControl>
    <ReagentRackNo Type="Int">1</ReagentRackNo>
    <ReagentSourceType Type="String">Reagentbox</ReagentSourceType>
  </LiquidTrack>
  <Message Type="String">
      2011-11-29 11:35:01 INFO 30603 : SP: [BATCH:2000678] [SAMPLE:] [COMMAND:] -
      Batch state changed, batch finished
  </Message>
  <SampleState Type="String">valid</SampleState>
  <SampleType Type="String">Sample</SampleType>
  <ReagentRacks Type="String">1,BufferBottle-1</ReagentRacks>
  <EnzymeReagentRacks Type="String"></EnzymeReagentRacks>
  <MinElutionVol Type="CVolume">0.0</MinElutionVol>
  <BufferVolume Type="CVolume">51.0</BufferVolume>
</SampleTrack>
```

Table 7. Description of SampleTrack parameters

Parameter	Dimension	Range	Description
SampleOutput Volume	CVolume	–	Eluate volume of the sample (same for all samples) in µl.
SampleCode	String	(not empty)	Sample ID. This can be generated automatically by the QIAsymphony SP, manually entered, or scanned during insertion of the tube carrier.
SamplePosition	String	[1–24] tube carrier [A:1–H:8] plate carrier	Sample position on the sample carrier.
AssaySet	String	(not empty)	ACS used for processing the sample.
Worklist	String	–	Name of the work list used for this sample. If a work list was not used, this field is empty.
AspirationMode	String	[P, C, N]	The type of liquid-level detection (LLD) used for aspiration ("P" = pressure, "C" = capacitive, "N" = no liquid-level detection).
ICAspirationMode	String	(empty) | P | C | N	The LLD method that was used for aspirating the IC added to the sample (pressure, capacitive, or none). Empty if no IC was added to the sample.

Table continued on next page.

Table continued from previous page.

Parameter	Dimension	Range	Description
ICPosition	String	(empty) | (a position on the IC carrier)	Information about the IC added to the sample; the position of the IC tube in the IC carrier. Empty if no IC was added to the sample.
SampleOutputPos	String	[A:1–H:8]	Position of the eluate on the elution rack.
Labware	String	–	If using the plate carrier, this field is empty. If using the tube carrier, this field displays the tube type.
ManuallyEdited	Bool	[1, 0]	"1" indicates that the sample ID and/or the sample tube type was manually modified. "0" indicates that neither the sample ID nor the sample tube type was manually modified.
SampleIdManually Edited	Bool	[1, 0]	"1" if the sample ID was changed manually, "0" otherwise.
LabwareManual Edited	Bool	[1, 0]	"1" if the sample tube type was changed manually, "0" otherwise.
LiquidTrack	Object	–	One or more elements. Each element contains information about a liquid that was added to the sample during processing. See "LiquidTrack" (page 29).

Table continued on next page.

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Parameter	Dimension	Range	Description
Message	String	–	One or more messages that related to the status of this samples (pausing, cancelling or finishing of the batch).
SampleState	String	[valid, invalid, unclear, empty]	State of the sample.
SampleStateItem	Object	–	History of sample states. See "SampleStateItem", page 30.
SampleType	String	[sample, positive extraction control, negative extraction control]	Type of the sample.
ReagentRacks	String	[1, 2, BufferBottle-1]	Reagent rack from which the beads and reagents for the sample were aspirated. "1" and "2" are the respective reagent boxes; BufferBottle-1 is the buffer bottle.
EnzymeReagent Racks	String	[1, 2]	Reagent rack from which the enzymes for the sample were taken. "1" and "2" are the respective reagent boxes.
MinElutionVol	CVolume	–	Minimal eluate volume in elution labware at the time of eluate transfer.
BufferVolume	CVolume	–	Volume for transferring elution buffer into sample prep cartridges.

LiquidTrack

A “LiquidTrack” element provides all information about liquid transfers associated with samples.

Example 5. LiquidTrack elements in *.xml format

```
<LiquidTrack Type="Object" Class ="LiquidTrack">
  <Quantity Type="Double">729.985581310458</Quantity>
  <Time Type="DateTime">20111129 11:34:55.037</Time>
  <Type Type="String">MBS</Type>
  <InternalControl Type="Bool">0</InternalControl>
  <ReagentRackNo Type="Int">1</ReagentRackNo>
  <ReagentSourceType Type="String">Beadwell</ReagentSourceType>
</LiquidTrack>
<LiquidTrack Type="Object" Class ="LiquidTrack">
  <Quantity Type="Double">379.977733162986</Quantity>
  <Time Type="DateTime">20111129 11:34:48.387</Time>
  <Type Type="String">QSW3</Type>
  <InternalControl Type="Bool">0</InternalControl>
  <ReagentRackNo Type="Int">101</ReagentRackNo>
  <ReagentSourceType Type="String">Reagentbox</ReagentSourceType>
</LiquidTrack>
<LiquidTrack Type="Object" Class ="LiquidTrack">
  <Quantity Type="Double">379.977733162986</Quantity>
  <Time Type="DateTime">20111129 11:34:55.045</Time>
  <Type Type="String">QSW5</Type>
  <InternalControl Type="Bool">0</InternalControl>
  <ReagentRackNo Type="Int">1</ReagentRackNo>
  <ReagentSourceType Type="String">Reagentbox</ReagentSourceType>
</LiquidTrack>
```

Table 8. Description of LiquidTrack parameters

Parameter	Dimension	Range	Description
Quantity	Double	–	Transferred liquid volume in µl.
Time	DateTime	–	Time when the liquid was transferred.
Type	String	(not empty)	Name of the reagent or IC.
InternalControl	Bool	[1, 0]	"1" if the liquid is IC, "0" otherwise.
ReagentRackNo	Int	Same as ReagentRack Track/Internal No	For a reagent: Internal number of the reagent rack from which the liquid was taken. For an internal control: "0".
ReagentSourceType	String	[Beadwell, Reagentbox, Enzyme rack, Buffer bottle, Unknown]	For a reagent: The type of container from which the reagent was taken. For internal control: Unknown.

SampleStateItem

A "SampleStateItem" element provides information about changes in sample status during sample processing. If the sample status is "valid", this element is not included.

Example 6. SampleStateItem elements in *.xml format

```
<SampleStateItem Type="Object" Class ="SampleStateItem">
  <SampleState Type="String">invalid</SampleState>
  <Time Type="DateTime">20111129 11:34:18.210</Time>
  <Command Type="String">TransferSample [3]</Command>
  <BioFB Type="String">First BioFB</BioFB>
  <Reason Type="String">WARNING 2070 : SP: [BATCH:2000001] [SAMPLE:2000] [COMMAND:TransferSample [3]] -
                        Pipetting channel module: no liquid level found.  (Pipetting Channel(s): 1) (Container(s):
                        SampleDrawer$PTHO-1$1) , ContainerList: SampleDrawer$PTHO-1$1 </Reason>
  <ReasonCode Type="Int">2070</ReasonCode>
</SampleStateItem>
```

Table 9. Description of SampleStateItem parameters

Parameter	Dimension	Range	Description
SampleState	String	(valid, unclear, invalid, empty)	Sample status (i.e., valid, unclear, invalid, empty). "Empty" indicates an unknown sample status.
Time	DateTime	–	Time at which the sample status changed.
Command	String	–	Command that initiated the change in sample state.
BioFB	String	–	Process step in which the sample state changed.
Reason	String	–	Error/message for change.
ReasonCode	Int	–	Error/message code for change.

Message

A "Message" element contains information about a single message associated with a particular batch. Messages are created when a run is paused, completed, or cancelled.

Example 7. Message elements in *.xml format

```
<Message Type="Object" Class ="ProcEventEssentials">
  <MessageId Type="Int">30633</MessageId>
  <MessageText Type="String">Eluate rack transported from AS to SP</MessageText>
  <Timestamp Type="DateTime">20111124 09:42:32.193</Timestamp>
  <CommandName Type="String"></CommandName>
  <Operator Type="String"></Operator>
  <SampleId Type="String"></SampleId>
  <SamplePosition Type="String"></SamplePosition>
</Message>
<Message Type="Object" Class ="ProcEventEssentials">
  <MessageId Type="Int">30639</MessageId>
  <MessageText Type="String">initiated transport for eluate rack from SP to AS</MessageText>
  <Timestamp Type="DateTime">20111124 10:48:25.057</Timestamp>
  <CommandName Type="String"></CommandName>
  <Operator Type="String"></Operator>
  <SampleId Type="String"></SampleId>
  <SamplePosition Type="String"></SamplePosition>
</Message>
```

Table 10. Description of Message parameters

Parameter	Dimension	Range	Description
MessageId	Int	–	Error code of the message that occurred.
MessageText	String	(not empty)	Text of the message.
Timestamp	DateTime	–	Timestamp of the message.
CommandName	String	–	If the error message is related to a specific script command, this element contains the name of the command.
Operator	String	–	If the cause of the message was triggered by an operator, their ID is shown here.
SampleId (updated)	String	(empty) | (a sample ID in the batch) | (a comma separated list of sample IDs in the batch)	If the message relates to a specific sample, the ID of the sample is given here. If the timestamp (within a certain range), message ID, message text, and command relate to several samples, a comma-separated list of affected sample IDs will be generated.
SamplePosition (updated)	String	(empty) | (a position on the sample rack) | (a comma separated list of positions on the sample rack)	If the message relates to a specific sample, this element denotes the position of the sample on the sample rack. If the timestamp (within a certain range), message ID, message text, and command relate to several samples, a comma-separated list of affected sample positions will be generated.

ProcessStepResult

A “ProcessStepResult” element describes the status of the lysis and eluate temperatures during processing of a particular batch.

Example 8. ProcessStepResult elements in *.xml format

```
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
  <ProcessStep Type="String">Lysis Temperature</ProcessStep>
  <Result Type="String">OK</Result>
</ProcessStepResult>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
  <ProcessStep Type="String">Shaker Speed</ProcessStep>
  <Result Type="String">unknown</Result>
</ProcessStepResult>
<ProcessStepResult Type="Object" Class ="ProcessStepResult">
  <ProcessStep Type="String">Eluate Temperature</ProcessStep>
  <Result Type="String">not required</Result>
</ProcessStepResult>
```

Table 11. Description of ProcessStepResult parameters

Parameter	Dimension	Range	Description
ProcessStep	String	[Lysis Temperature, Shaker Speed, Eluate Temperature]	Denotes the process step. Only Lysis Temperature and Eluate Temperature are used. Shaker Speed is not used.
Result	String	[OK, not OK, disabled, not required, unknown]	Lysis Temperature: “OK” indicates the temperature was reached; “not OK” indicates the temperature could not be reached in time. Eluate Temperature: “OK” indicates eluate cooling was in the defined temperature range; “not OK” indicates eluate cooling was not in the defined temperature range; “disabled” indicates cooling was disabled; “not required” indicates that eluate cooling was not required. Shaker Speed: Always unknown.

AssaySetTrack

An “AssaySetTrack” element provides information about the Assay Control Set that was used to process a particular batch.

Example 9. AssaySetTrack element in *.xml format

```
<AssaySetTrack Type="Object" Class ="AssaySetTrack">
  <Name Type="String">Virus 1000</Name>
  <ICName Type="String">Internal Control 1</ICName>
  <ICBarcode Type="String">1111</ICBarcode>
  <ICPositionInfo Type="Object" Class ="ICPositionInfo">
    <ICPosition Type="String">3</ICPosition>
    <ICAspirationMode Type="String">C</ICAspirationMode>
  </ICPositionInfo>
  <ICPositionInfo Type="Object" Class ="ICPositionInfo">
    <ICPosition Type="String">4</ICPosition>
    <ICAspirationMode Type="String">C</ICAspirationMode>
  </ICPositionInfo>
  <ICPositionInfo Type="Object" Class ="ICPositionInfo">
    <ICPosition Type="String">5</ICPosition>
    <ICAspirationMode Type="String">C</ICAspirationMode>
  </ICPositionInfo>
</AssaySetTrack>
```

Table 12. Description of AssaySetTrack parameters

Parameter	Dimension	Range	Description
Name	String	(not empty)	Name of the ACS; taken from the tag AssayControlSetName in the ACS file.
ACSAuthentic (new)	String	[1,0]	Flag that specifies if the assay control set is a genuine QIAGEN file: ■ “1” if ACS is a genuine QIAGEN file. ■ “0” if ACS is customized file.
ICName	String	–	Name of the IC as stated in ACS.
ICBarcode	String	–	ID of the IC (bar code from IC tube).
ICPositionInfo	Object	–	One or more elements containing position and LLD mode. See “ICPositionInfo”, page 35.

ICPositionInfo

An "ICPositionInfo" element provides information about an internal control that was used with a particular Assay Control Set.

Example 10. ICPositionInfo element in *.xml format

```
<ICPositionInfo Type="Object" Class ="ICPositionInfo">
   <ICPosition Type="String">3</ICPosition>
   <ICAspirationMode Type="String">C</ICAspirationMode>
</ICPositionInfo>
<ICPositionInfo Type="Object" Class ="ICPositionInfo">
   <ICPosition Type="String">4</ICPosition>
   <ICAspirationMode Type="String">C</ICAspirationMode>
</ICPositionInfo>
<ICPositionInfo Type="Object" Class ="ICPositionInfo">
   <ICPosition Type="String">5</ICPosition>
   <ICAspirationMode Type="String">C</ICAspirationMode>
</ICPositionInfo>
```

Table 13. Description of ICPositionInfo parameters

Parameter	Dimension	Range	Description
ICPosition	String	[1–24]	Position of the IC on the tube carrier.
ICAspirationMode	String	[C, P, N]	Aspiration mode that was used for LLD (capacitive, pressure, or none).

ReagentRackTrack

A "ReagentRackTrack" element provides all information about a reagent rack and associated reagents for a particular run. A reagent rack can be a reagent cartridge, buffer bottle, or alcohol trough.

Example 11. ReagentRackTrack element in *.xml format

```
<ReagentRackTrack Type="Object" Class ="ReagentRackTrack">
  <ReagentRackLabel Type="String">Reagent rack number</ReagentRackLabel>
  <Id Type="String">807002511212345671112123456 72</Id>
  <IdentNo Type="String">8090045</IdentNo>
  <LogicalName Type="String"></LogicalName>
  <LastSlotName Type="String">Reagentbox-2</LastSlotName>
  <AllSlotNames Type="String">Reagentbox-2</AllSlotNames>
  <Lot Type="String">1121234567</Lot>
  <Name Type="String">QIAsymphony DSP Virus/Pathogen Midi Kit, catalog no. 937055</Name>
  <InternalNo Type="Int">1</InternalNo>
  <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
  <BeadwellId Type="String">8070025</BeadwellId>
  <BeadwellLotId Type="String">1121234567</BeadwellLotId>
  <EnzymRackId Type="String">8070025</EnzymRackId>
```

```
  <EnzymRackLotId Type="String">1121234567</EnzymRackLotId>
  <Homogeneity Type="String">passed</Homogeneity>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    <Id Type="String">QSL2</Id>
    <Position Type="Int">1</Position>
    <Lot Type="String">1121234567-1</Lot>
    <Volume Type="Double">43000</Volume>
    <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
    <Expired Type="Bool">0</Expired>
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    <Id Type="String">QSB1</Id>
    <Position Type="Int">2</Position>
    <Lot Type="String">1121234567-1</Lot>
    <Volume Type="Double">75000</Volume>
    <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
    <Expired Type="Bool">0</Expired>
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    <Id Type="String">QSW1</Id>
    <Position Type="Int">3</Position>
    <Lot Type="String">1121234567-1</Lot>
    <Volume Type="Double">84000</Volume>
    <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
    <Expired Type="Bool">0</Expired>
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    …
  </ReagentTrack>
</ReagentRackTrack>
```

Table 14. Description of ReagentRackTrack parameters

Parameter	Dimension	Range	Description
ReagentRackLabel	String	[Buffer bottle, Accessory trough, Reagent rack number]	Denotes the type of reagent rack. "Buffer bottle" indicates a buffer bottle. "Accessory trough" indicates an alcohol trough, and the reagent rack number is displayed if the rack is a reagent box.
Id	String	(not empty)	Reagent box: Combination of Ident No, Lot, Internal No, Enzyme Rack Lot Id, and internal slot number. Buffer bottle: Bar code that was entered or scanned. Accessory trough: Alcohol-Trough or Alcohol-Trough-1.
IdentNo	String		Reagent box: "IdentNo" identifies the type of reagent box that was used (e.g., AXpH DNA Kit (192). Buffer bottle: Bar code that was entered or scanned. Accessory trough: Field remains empty.

Table continued on next page.

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Parameter	Dimension	Range	Description
LogicalName (updated)	String	[BufferBottle-X, X >=1]	For the first deployed buffer bottle in the buffer bottle slot, the logical name is "BufferBottle-1". If the buffer bottle is exchanged, the number is incremented (e.g., "BufferBottle-2", "BufferBottle-3", etc.).
LastSlotName	String	[Reagentbox-1, Reagentbox-2, BufferBottle-1, Alcohol-Trough, Alcohol-Trough-1]	The slot on which the reagent rack was placed. Reagent box: "Reagentbox-1" or "Reagentbox-2". Buffer bottle: "BufferBottle-1". Accessory trough: "Alcohol-Trough" or "Alcohol-Trough-1".
AllSlotNames	String	(Reagentbox-1, Reagentbox-2, BufferBottle-1, Alcohol-Trough, Alcohol-Trough-1)	The slot on which the reagent rack was loaded. Reagent cartridge: "Reagentbox-1" or "Reagentbox-2". Buffer bottle: "BufferBottle-1". Accessory trough: "Alcohol-Trough" or "Alcohol-Trough-1".

Table continued on next page.

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Parameter	Dimension	Range	Description
Lot	String	(not empty)	The lot number of the reagent rack. Reagent box: Lot number that was read from the bar code of the first reagent (lot number is the same for all reagents). Buffer bottle: This field is "Unknown". Accessory trough: This field is "Unknown".
Name	String	(not empty)	Reagent box: Name of the reagent rack, including catalog no. Buffer bottle: "BufferBottle60Rack". Accessory trough: "AlcoTroughRack".
InternalNo (updated)	Int	For ReagentBoxes [1, 2], for BufferBottles [101, 102, ...], for AlcoTrough [151, 152]	Internal number of reagent rack. If using a Reagent box (i.e., a ReagentRackTrack exists and InternalNo is within range), print InternalNo as "Reagent rack number" within the "Reagent information" table.
ExpirationDate	DateTime	–	Reagent box and buffer bottle: Earliest expiration date with respect to the reagents in the rack. If the bar code did not contain an expiration date, this field is empty. Accessory trough: This field remains empty.

Table continued on next page.

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Parameter	Dimension	Range	Description
BeadwellID	String	–	Reagent box: ID read from the beadwell bar code. Buffer bottle and accessory trough: This field remains empty.
BeadwellLotID	String	–	Reagent box: Lot number read from the beadwell bar code. Buffer bottle and accessory trough: Field remains empty.
EnzymRackId changed	String	–	Reagent box: ID read from the enzyme rack bar code. Buffer bottle and accessory trough: Field remains empty.
EnzymRackLotId	String	–	Reagent box: Lot number read from the enzyme rack bar code. Buffer bottle and accessory trough: Field remains empty.
Homogeneity	String	[passed | failed]	"Passed" if lot numbers and IDs of all reagents and the enzyme rack are matching. Otherwise, "Failed".
ReagentTrack (one or more)	–	–	One or more elements containing information about the reagents in this reagent rack. See "ReagentTrack", page 41.

ReagentTrack

A “ReagentTrack” element provides information about one reagent in a particular reagent rack. There is a “ReagentRack” element for each reagent in the reagent rack. Buffer bottles and alcohol troughs hold only one reagent, resulting in one “ReagentRack” element. However, a reagent cartridge holds more than one reagent, resulting in more than one “ReagentRack element”.

Example 12. ReagentTrack element in *.xml format

```
...
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    <Id Type="String">PK</Id>
    <Position Type="Int">11</Position>
    <Lot Type="String">1121234567</Lot>
    <Volume Type="Double">2000</Volume>
    <ExpirationDate Type="DateTime">20120101 00:00:00.000</ExpirationDate>
    <Expired Type="Bool">0</Expired>
  </ReagentTrack>
 </ReagentRackTrack>
```

Table 15. Description of ReagentTrack parameters

Parameter	Dimension	Range	Description
Id	String	(not empty)	Name of the reagent.
Position	Int	[1–15]	Position of the reagent on the reagent rack. For reagent cartridges: 1–7 are the 120 ml reagent wells, starting from the left, 8 is the bead well, and 9–15 are the enzyme tubes, starting from the left.
Lot	String	(not empty)	Lot number of reagent; same for all reagents.
Volume	Double	–	Volume of reagent.
ExpirationDate	DateTime	–	Expiration date of reagent; same for all reagents.
Expired	Bool	[1, 0]	“1” if reagent is expired; ”0” if reagent not expired.

InternalControlTrack

Each “InternalControlTrack” element specifies information about one internal control used by any Assay Control Set that was eluted on this rack.

Example 13. InternalControlTrack element in *.xml format

```
<InternalControlTrack Type="Object" Class ="InternalControlTrack">
  <ICName Type="String">Internal Control 1</ICName>
  <ICBarcode Type="String">1021</ICBarcode>
  <ICTubeInfo Type="Object" Class ="ICTubeInfo">
      <ICTubePosition Type="String">3</ICTubePosition>
      <ICTubeLabware Type="String">BD#352051 FalconPP 17x100</ICTubeLabware>
  </ICTubeInfo>
  <ICTubeInfo Type="Object" Class ="ICTubeInfo">
      <ICTubePosition Type="String">4</ICTubePosition>
      <ICTubeLabware Type="String">BD#352051 FalconPP 17x100</ICTubeLabware>
  </ICTubeInfo>
  <ICTubeInfo Type="Object" Class ="ICTubeInfo">
      <ICTubePosition Type="String">5</ICTubePosition>
      <ICTubeLabware Type="String">BD#352051 FalconPP 17x100</ICTubeLabware>
  </ICTubeInfo>
  <AssayControlSetName Type="String">Virus 1000</AssayControlSetName>
 </InternalControlTrack>
```

Table 16. Description of InternalControlTrack parameters

Parameter	Dimension	Range	Description
ICName	String	–	Name of the IC as stated in ACS.
ICBarcode	String	–	ID of the IC (bar code from IC tube).
ICTubeInfo	Object	–	One or more elements containing information about the tubes that contain this IC. See “ICTubeInfo”, page 43.
AssayControl SetName	String	–	One or more elements. Contains the names of the ACS that use this IC.

ICTubeInfo

An “ICTubeInfo” element specifies a particular type of tube in one position on the IC carrier.

Example 14. ICTubeInfo element in *.xml format

```
<ICTubeInfo Type="Object" Class ="ICTubeInfo">
   <ICTubePosition Type="String">3</ICTubePosition>
   <ICTubeLabware Type="String">BD#352051 FalconPP 17x100</ICTubeLabware>
</ICTubeInfo>
<ICTubeInfo Type="Object" Class ="ICTubeInfo">
   <ICTubePosition Type="String">4</ICTubePosition>
   <ICTubeLabware Type="String">BD#352051 FalconPP 17x100</ICTubeLabware>
</ICTubeInfo>
```

Table 17. Description of ICTubeInfo parameters

Parameter	Dimension	Range	Description
ICTubePosition	String	[1–24]	Position of the IC tube in the IC carrier.
ICTubeLabware	String	–	Labware selected at the GUI for this IC tube.

Start Batch Confirmation Files

If enabled in the configuration dialog, the QIAsymphony SP writes a start batch confirmation file at the start of each batch. Start batch confirmation files contain information about the samples being processed, the Assay Control Set, and elution rack used. The structure of start batch confirmation files is very similar to the QIAsymphony SP result file.

A start batch confirmation file in ***.xml** format consists of several elements, the number of which varies depending on the batch. "FullPlateTrack" is the root element that contains all other elements of the result file. Each element consists of parameters that provide information about a particular feature of a batch on the QIAsymphony SP. Example 15 shows a complete start batch confirmation file for a batch with 2 samples. The following sections describe each element in more detail.

Example 15. Start batch confirmation file for a batch with 2 samples in *.xml format

```
<?xml version="1.0" encoding="UTF-8"?>
<FullPlateTrack Type="Object" Class ="StartBatchConfirmation">
  <PlateID Type="String">elu_7902</PlateID>
  <RackType Type="String">QIA#19588 EMTR</RackType>
  <SlotNo Type="UInt">2</SlotNo>
  <LoadingTime Type="DateTime">20111129 11:34:18.210</LoadingTime>
  <LoadedByOperator Type="String">Operator</LoadedByOperator>
  <Instrument Type="String">qssp4584</Instrument>
  <SoftwareVersion Type="String">4.0.0 (RC)</SoftwareVersion>
  <ProcessConfigurationProfile Type="String">None</ProcessConfigurationProfile>
  <Filename Type="String">/opt/log/StartBatchConfirmation/SP/20110726094607_2000415.xml</Filename>
  <BatchTrack Type="Object" Class ="BatchTrack">
       <ScriptName Type="String">BS_Virus_1000</ScriptName>
      <ScriptVersion Type="String">1.00</ScriptVersion>
      <BatchID Type="UInt">2000415</BatchID>
      <Operator Type="String">Developer</Operator>
      <StartedByOperator Type="String">Operator</StartedByOperator>
      <OrderingTime Type="DateTime">20111129 11:34:41.315</OrderingTime>
      <StartOfRun Type="DateTime">20111129 11:34:45.243</StartOfRun>
      <IsPlateMode Type="Bool">0</IsPlateMode>
      <SampleRackNo Type="UInt">1</SampleRackNo>
      <EluateRackID Type="String">elu_7902</EluateRackID>
      <SampleRackID Type="String">T0101547</SampleRackID>
      <SampleRackType Type="String">PTHO Carrier</SampleRackType>
      <EluateSlotNo Type="UInt">2</EluateSlotNo>
      <NeedsEluateCooling Type="Bool">0</NeedsEluateCooling>
      <IvD Type="Bool">0</IvD>
      <Worklists Type="Object" Class ="Worklists">
      </Worklists>
      <SampleTrack Type="Object" Class ="SampleTrack">
                <SampleOutputVolume Type="CVolume">60.0</SampleOutputVolume>
                <SampleCode Type="String">1001</SampleCode>
                <SamplePosition Type="String">1</SamplePosition>
                <AssaySet Type="String">Virus 1000</AssaySet>
                <Worklist Type="String"></Worklist>
                <Labware Type="String">BD#352051 FalconPP 17x100</Labware>
```

```
                <ManuallyEdited Type="Bool">0</ManuallyEdited>
                <SampleIdManuallyEdited Type="Bool">0</SampleIdManuallyEdited>
                <LabwareManualEdited Type="Bool">0</LabwareManualEdited>
                <SampleType Type="String">Sample</SampleType>
                <BufferVolume Type="CVolume">62.0</BufferVolume>
        </SampleTrack>
        <SampleTrack Type="Object" Class ="SampleTrack">
                <SampleOutputVolume Type="CVolume">60.0</SampleOutputVolume>
                <SampleCode Type="String">1010</SampleCode>
                <SamplePosition Type="String">10</SamplePosition>
                <AssaySet Type="String">Virus 1000</AssaySet>
                <Worklist Type="String"></Worklist>
                <Labware Type="String">BD#352051 FalconPP 17x100</Labware>
                <ManuallyEdited Type="Bool">0</ManuallyEdited>
                <SampleIdManuallyEdited Type="Bool">0</SampleIdManuallyEdited>
                <LabwareManualEdited Type="Bool">0</LabwareManualEdited>
                <SampleType Type="String">Sample</SampleType>
                <BufferVolume Type="CVolume">62.0</BufferVolume>
                </SampleTrack>
        <SampleTrack Type="Object" Class ="SampleTrack">
                <SampleOutputVolume Type="CVolume">60.0</SampleOutputVolume>
                <SampleCode Type="String">1011</SampleCode>
                <SamplePosition Type="String">11</SamplePosition>
                <AssaySet Type="String">Virus 1000</AssaySet>
                <Worklist Type="String"></Worklist>
                <Labware Type="String">BD#352051 FalconPP 17x100</Labware>
                <ManuallyEdited Type="Bool">0</ManuallyEdited>
                <SampleIdManuallyEdited Type="Bool">0</SampleIdManuallyEdited>
                <LabwareManualEdited Type="Bool">0</LabwareManualEdited>
                <SampleType Type="String">Sample</SampleType>
                <BufferVolume Type="CVolume">62.0</BufferVolume>
        </SampleTrack>
        <SampleTrack Type="Object" Class ="SampleTrack">
                ...
         </SampleTrack>
        <SampleTrack Type="Object" Class ="SampleTrack">
                ...
         </SampleTrack>
        <SampleTrack Type="Object" Class ="SampleTrack">
                ...
         </SampleTrack>
    </BatchTrack>
</FullPlateTrack>

<!-- QIAsymphony_CHECKSUM czDcVKWs1iu+G2sPw9k0PicTrK7Wu+Kr/LjvinMlsvA=-->
```

FullPlateTrack

The “FullPlateTrack” element provides information about the elution rack, as well as general information about the environment of the batch, such as the serial number of the QIAsymphony instrument and the software version.

Example 16. FullPlateTrack element in *.xml format

```
<FullPlateTrack Type="Object" Class ="StartBatchConfirmation">
  <PlateID Type="String">elu_7902</PlateID>
  <RackType Type="String">QIA#19588 EMTR</RackType>
  <SlotNo Type="UInt">2</SlotNo>
  <LoadingTime Type="DateTime">20111129 11:34:18.210</LoadingTime>
  <LoadedByOperator Type="String">Operator</LoadedByOperator>
  <Instrument Type="String">qssp4584</Instrument>
  <SoftwareVersion Type="String">4.0.0 (RC)</SoftwareVersion>
  <ProcessConfigurationProfile Type="String">None</ProcessConfigurationProfile>
  <Filename Type="String">/opt/log/StartBatchConfirmation/SP/20110726094607_2000415.xml</Filename>
  <BatchTrack Type="Object" Class ="BatchTrack">
      ...
  </BatchTrack>
</FullPlateTrack>
```

Table 18. Description of FullPlateTrack parameters

Parameter	Dimension	Range	Description
PlateID	String	(not empty)	ID of the elution rack used by this batch. This can be its bar code, a user-defined ID, or an ID generated by the QIAsymphony SP.
RackType	String	(not empty)	Elution rack type.
SlotNo	UInt	(1–4)	Slot number on the “Eluate” drawer, where the elution rack is loaded.
LoadingTime	DateTime	–	Time the elution rack was loaded on the QIAsymphony SP.
LoadedBy Operator	String	(not empty)	ID of the user that loaded the rack.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
Instrument	String	(not empty)	Serial number of the QIAsymphony SP on which the eluates were processed.
SoftwareVersion	String	(not empty)	Software version that created this file. A string in the form X.Y.Z. "X" indicates the major version, "Y" indicates the minor version, and "Z" indicates the revision number (e.g., 3.1.2).
Process Configuration Profile	String	None | (name of a process configuration profile)	ID of the process configuration profile that was used for the current configuration. For manual changes to a profile without saving, the documented ID is "None".
Filename	String	(not empty)	Name of this start batch confirmation file including the full path.
BatchTrack	–	–	Batch that is described by this file. See "BatchTrack", page 48.

BatchTrack

The “BatchTrack” element describes the parameters of the batch that has been started.

Example 17. BatchTrack element in *.xml format

```
<BatchTrack Type="Object" Class ="BatchTrack">
  <ScriptName Type="String">BS_Virus_1000</ScriptName>
  <ScriptVersion Type="String">1.00</ScriptVersion>
  <BatchID Type="UInt">2000415</BatchID>
  <Operator Type="String">Developer</Operator>
  <StartedByOperator Type="String">Operator</StartedByOperator>
  <OrderingTime Type="DateTime">20111129 11:34:41.315</OrderingTime>
  <StartOfRun Type="DateTime">20111129 11:34:45.243</StartOfRun>
  <IsPlateMode Type="Bool">0</IsPlateMode>
  <SampleRackNo Type="UInt">1</SampleRackNo>
  <EluateRackID Type="String">elu_7902</EluateRackID>
  <SampleRackID Type="String">T0101547</SampleRackID>
  <SampleRackType Type="String">PTHO Carrier</SampleRackType>
  <EluateSlotNo Type="UInt">2</EluateSlotNo>
  <NeedsEluateCooling Type="Bool">0</NeedsEluateCooling>
  <IvD Type="Bool">0</IvD>
  <Worklists Type="Object" Class ="Worklists">
  </Worklists>
  <SampleTrack Type="Object" Class ="SampleTrack">
      ...
  </SampleTrack>
  <SampleTrack Type="Object" Class ="SampleTrack">
      ...
  </SampleTrack>
</BatchTrack>
```

Table 19. Description of BatchTrack parameters

Parameter	Dimension	Range	Description
ScriptName	String	(not empty)	The name of the script (protocol) that is related to the entire batch (i.e., to all its samples). Taken from the tag ScriptName of the ***.xml** file of the protocol.
ScriptVersion	String	–	Script version of the protocol. This may be empty if the script version in the protocol is empty.
BatchID	UInt	(>1000000)	ID of the batch.
Operator	String	(not empty)	The id of the user who ordered the batch.
StartedByOperator	String	(not empty)	ID of the user who started the run.
OrderingTime	DateTime	–	Time the batch was queued (i.e., when ordering was finished).
StartOfRun	DateTime	–	Time batch processing was started.
IsPlateMode	Bool	[1, 0]	"1" if plate carriers were used for samples, "0" if tube carriers were used.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
SampleRackNo	UInt	[1–4] (tube carrier) [6–9] (plate carrier)	Slot of the sample rack; 1–4 if a tube carrier was used; 6–9 if a plate carrier was used.
EluateRackID	String	(not empty)	ID of the eluate rack that contains the eluate of this batch. Same value as FullPlateTrack/PlateID.
SampleRackID	String	Depends on SampleRackType	Empty for tube carrier; for a rack carrier, the sample rack ID is given.
SampleRackType	String	[PTHO Carrier, (not empty)]	Tube for tube carrier; for rack carrier, the chosen rack type is given.
EluateSlotNo	UInt	[1–4]	Number of the slot on the eluate drawer, where the eluate rack of the batch is placed. Same value as FullPlateTrack/SlotNo.
NeedsEluateCooling	Bool	[1, 0]	"1" if the script uses eluate cooling functionality. "0" if the script does not use eluate cooling.
IvD	Bool	[1, 0]	Not used.
Worklists	Object	–	A list of work lists that were used for ordering the batch. See "Worklists", page 24.
SampleTrack	Object	–	1–24 samples that were processed in the batch. See "SampleTrack", page 51.

SampleTrack

Each “SampleTrack” element provides details about one sample that is processed in the batch.

Example 18. SampleTrack element in *.xml format

```
<SampleTrack Type="Object" Class ="SampleTrack">
  <SampleOutputVolume Type="CVolume">60.0</SampleOutputVolume>
  <SampleCode Type="String">1001</SampleCode>
  <SamplePosition Type="String">1</SamplePosition>
  <AssaySet Type="String">Virus 1000</AssaySet>
  <Worklist Type="String"></Worklist>
  <Labware Type="String">BD#352051 FalconPP 17x100</Labware>
  <ManuallyEdited Type="Bool">0</ManuallyEdited>
  <SampleIdManuallyEdited Type="Bool">0</SampleIdManuallyEdited>
  <LabwareManualEdited Type="Bool">0</LabwareManualEdited>
  <SampleType Type="String">Sample</SampleType>
  <BufferVolume Type="CVolume">62.0</BufferVolume>
</SampleTrack>
```

Table 20. Description of SampleTrack parameters

Parameter	Dimension	Range	Description
SampleOutput Volume	CVolume	–	Eluate volume of the sample (same for all samples) in µl.
SampleCode	String	(not empty)	Sample ID; virtually generated, entered manually, or scanned during insertion of tube carrier.
SamplePosition	String	[1–24] (tube carrier) [A:1–H:8] (plate carrier)	Sample position on the sample carrier.
AssaySet	String	(not empty)	ACS used for processing the sample.
Worklist	String	–	Worklist used for ordering the sample or empty, if no worklist was used.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
Labware	String	–	Tube carrier: Labware of the sample tube. Plate carrier: This field remains empty.
ManuallyEdited	Bool	[1, 0]	OR relationship between SampleIdManuallyEdited and LabwareManualEdited.
LabwareManualEdited	Bool	[1, 0]	"1", If the sample tube type was changed manually, "0" if not changed manually.
SampleType	String	[Sample, positive extraction control, negative extraction control]	Sample type.
BufferVolume	CVolume	–	Volume of elution buffer transferred into sample prep cartridges.

QIAsymphony AS Result File

A QIAsymphony AS result file in ***.xml** format consists of several elements, the number of which can vary depending on the assay run. "BatchTrack" is the root element that contains all other elements of the result file. Each element consists of parameters that provide information about a particular feature of an assay run on the QIAsymphony AS (Table 21). The following sections describe each element in more detail.

Table 21. Description of QIAsymphony AS result file elements

Element	Level	Description
BatchTrack	Root element	Provides all information within the result file. Each result file provides information about one assay run. Each assay run may contain information about multiple assays, elution racks, and assay racks.
TimeSpans	1	This element contains individual "TimeSpan" elements.
TimeSpans	2	Provides information about the time that elapsed between 2 events that occurred during an assay run.
WorklistNames	1	Provides the names of any work lists that were used in the assay run.
InputPlateTrack	1	Provides information about one elution rack. This element does not describe the individual samples in the elution rack.
OutputPlateTrack	1	Provides information about one assay rack.
AssayPointTrack	2	Provides information about one position on the assay rack and the liquids that are contained in this position.
StateHistoryItem	3	Provides information about the change in status of an assay at a particular position in the assay rack.

Table continued on the next page.

Table continued from the previous page.

Element	Level	Description
CyclerFileNames	2	Provides names of cycler files that were generated in an assay run.
ReagentPlateTrack	1	Provides information about one reagent adapter.
ReagentTrack	2	Provides information about the content of one position on the reagent adapter.
ReagentAssay AssignmentTrack	3	Contains information about which assays (Assay Parameter Set/Assay Definition; APS/AD) are assigned to a reagent on a reagent adapter.
Normalization PlateTrack (new)	1	Provides information about the used normalization racks.
Normalization PointTrack (new)	2	Contains information about one position on the normalization plate.
TipUsage Information	1	Provides information about the calculated number of tips, of a particular type, required for the assay run.
AssayInfoTrack	1	Provides information about one assay in the assay run.
CurrentParameters	2	Provides information about the assay parameters that were used during the assay run.
TimeSpans	2	Provides information about Time spans that apply to this assay.
TimeSpan	3	Contains information about one time span.
Dyes (new)	2	Provides information about possible dyes specified in the assay.
DyeTrack (new)	3	Provides the dye name. Contains (optionally) the ABIInfo if the APS holding this dye targets ABI cyclers.
ABIInfo (new)	4	Contains specific information for the ABI cycler software.

Table continued on the next page.

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Element	Level	Description
StandardCurveTrack (new)	2	Provides information about the standard series created for this assay, if any.
StandardCurvePointTrack (new)	3	Contains detailed information about each dilution concentration.
Message	1	Provides information about information or error messages that occurred during the assay run.
AdditionalReagent Track	1	Provides information about the components of the ready-to-use master mix. If ready-to-use master mix was not used, this element is not present.
ReagentsMapPair (updated)	2	Provides information about one component of the ready-to-use master mix.
Temperature Measurements Track	1	Provides information about all temperature measurements that were taken during the assay run.
TemperatureTrack	2	Provides information about the temperature measurements that were taken for a particular slot during the assay run.

Example 19. QIAsymphony AS result file root element in *.xml format

```
<?xml version="1.0" encoding="UTF-8"?>
<BatchTrack Type="Object" Class ="BatchTrack">
        ...
</BatchTrack>

<!-- QIAsymphony_CHECKSUM r4bTvQ8DQrC623jQmSpeXpN5/rwzt40yGql4rpBpyvk=-->
```

Table 22. Description of QIAsymphony AS result file root element

Parameter	Dimension	Range	Description
BatchTrack	Object	–	Result files contain exactly one top-level element <BatchTrack> that contains all information of the result file. One result file describes exactly one run that may contain multiple assays, sample racks, and assay racks. See "BatchTrack" (below) for more details about parameters in this element.

BatchTrack

The BatchTrack element provides all information within the result file. Each result file provides information about one assay run. Each assay run may provide information about multiple assays, sample racks, and assay racks.

Example 20. BatchTrack element in *.xml format

```
<BatchTrack Type="Object" Class ="BatchTrack">
  <Instrument Type="String">xnap000</Instrument>
  <SoftwareVersion Type="String">4.0.0 (development)</SoftwareVersion>
  <ProcessConfigurationProfile Type="String">None</ProcessConfigurationProfile>
  <AllSamplesOK Type="String">passed</AllSamplesOK>
  <Filename Type="String">
      c:/Dev/xNASoftware/4_BRA/log/Results/AS/ResultFile_20111130_092226_3000113.xml
  </Filename>
  <LoadingInformationFilename Type="String">
      c:/Dev/xNASoftware/4_BRA/log/LoadingInformation/LoadingInformation_20111130_092134_3000113.xml
  </LoadingInformationFilename>
  <Preliminary Type="Bool">0</Preliminary>
  <BatchID Type="UInt">3000113</BatchID>
  <Operator Type="String">Operator</Operator>
  <Roles Type="String">Operator</Roles>
  <OrderingTime Type="DateTime">20111130 09:21:34.766</OrderingTime>
  <StartOfRun Type="DateTime">20111130 09:22:26.292</StartOfRun>
  <EndOfRun Type="DateTime">20111130 09:23:50.049</EndOfRun>
  <Duration Type="Int">83</Duration>
  <DurationHrs Type="Int">0</DurationHrs>
  <DurationMin Type="Int">1</DurationMin>
  <DurationSec Type="Int">23</DurationSec>
  <TimeSpans Type="Object" Class ="TimeSpanTrackList">
  </TimeSpans>
  <WorklistNames Type="Object" Class ="WorklistNames">
  </WorklistNames>
  <InputPlateTrack Type="Object" Class ="InputPlateTrack">
      ...
  </InputPlateTrack>
  <OutputPlateTrack Type="Object" Class ="OutputPlateTrack">
      ...
```

```
  </OutputPlateTrack>
  <ReagentPlateTrack Type="Object" Class ="ReagentPlateTrack">
      ...
  </ReagentPlateTrack>
  <NormalizationPlateTrack Type="Object" Class ="NormalizationPlateTrack">
      ...
  </NormalizationPlateTrack>
  <TipUsageInformation Type="Object" Class ="TipUsageInformation">
      ...
  </TipUsageInformation>
  <RefillTipsDuringRun Type="String"></RefillTipsDuringRun>
  <AssayInfoTrack Type="Object" Class ="AssayInfoTrack">
      ...
  </AssayInfoTrack>
  <Message Type="Object" Class ="ProcEventEssentials">
      ...
  </Message>
  <AdditionalReagentTrack Type="Object" Class ="AdditionalReagentTrack">
      ...
  </AdditionalReagentTrack>
  <TemperatureMeasurementsTrack Type="Object" Class ="TemperatureMeasurementsTrack">
      ...
  </TemperatureMeasurementsTrack>
</BatchTrack>
```

Table 23. Description of BatchTrack parameters

Parameter	Dimension	Range	Description
Instrument	String	–	Name of the device that created the file.
SoftwareVersion	String	–	Software version installed.
ProcessConfiguration Profile	String	None | (name of a process configuration profile)	Process configuration profile ID used for current configuration. For manual changes to a profile without saving, the documented ID is “None”.

Table continued on the next page.

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Parameter	Dimension	Range	Description
AllSamplesOK (updated)	String	[passed, failed, unclear]	"Passed" if all samples in this result file are valid. "Failed" if at least one sample is invalid. "Unclear" if at least one sample is unclear and neither is invalid.
Filename	String	–	Path to this file and file name.
LoadingInformation Filename	String	–	Path to the loading information XML file for this run and its file name.
Preliminary	Bool	[1, 0]	"1" indicates a preliminary result file (i.e., assay racks are still on the QIAsymphony AS). "0" indicates the assay racks have been removed.
BatchID	UInt	–	Run ID.
Operator	String	–	User that defined this assay run.
Roles	String	–	Roles assigned to <Operator> (e.g., Administrator, User, etc.)
OrderingTime	DateTime	–	Date and time when the assay run was defined (queued).
StartOf Run	DateTime	–	Date and time the run was started (by pressing "Run").
EndOfRun	DateTime	–	Date and time the run finished.
Duration	Int (seconds)	–	Duration of the run.

Table continued on the next page.

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Parameter	Dimension	Range	Description
DurationHrs	Int (hours)	–	Duration in hours.
DurationMin	Int (minutes)	0..59	Duration in minutes.
DurationSec	Int (seconds)	0..59	Duration in seconds.
TimeSpans	Object (Class="TimeSpanTrackList"	–	Time spans that apply to the whole run. See "TimeSpans (level 2)", page 61.
WorklistNames	Object	–	The names of the work lists used to define this assay run, if any. See "WorklistNames", page 63.
InputPlateTrack (one or more)	Object	–	The sample racks used. See "InputPlateTrack", page 63.
OutputPlateTrack (one or more)	Object	–	The assay racks used. See "OutputPlateTrack", page 64.
ReagentPlateTrack (one or more)	Object	–	The reagents used. See "ReagentPlateTrack", page 74.
NormalizationPlateTrack (one or more) (new)	Object	–	The normalization racks used.
TipUsageInformation (one or more)	Object	–	Original estimate of the number of disposable filter tips used.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
RefillTipsDuringRun	String	–	If refilling tips during the run is required, an informational text, and empty otherwise.
AssayInfoTrack (one or more)	Object	–	The selected assays and their parameters. See "AssayInfoTrack", page 82.
Message (zero or more)	Object (Class= "ProcEvent Essentials")	–	Important messages and events during the run. See "Message", page 94.
Additional ReagentTrack (zero or more)	Object	–	Ready-to-use master mix contents. See "AdditionalReagentTrack", page 95.
Temperature Measurements Track (zero or more)	Object	–	Temperature measurements at various points in time during the run. See "TemperatureMeasurements Track", page 96.

TimeSpans (level 1)

This element contains individual "TimeSpan" (level 2) elements.

Example 21. TimeSpans (level 1) element in *.xml format

```
<TimeSpans Type="Object" Class ="TimeSpanTrackList">
  <TimeSpan Type="Object" Class ="TimeSpanTrack">
      ...
  </TimeSpan>
  <TimeSpan Type="Object" Class ="TimeSpanTrack">
      ...
  </TimeSpan>
</TimeSpans>
```

Table 24. Description of TimeSpans (level 1) parameters

Parameter	Dimension	Range	Description
TimeSpan (zero or more)	Object (Class="TimeSpanTrack")	–	A time span. See "TimeSpans (level 2)", page 61.

TimeSpans (level 2)

A "TimeSpans" (level 2) element provides information about the time that elapsed between 2 events that occurred during an assay run.

Example 22. TimeSpans (level 2) element in *.xml format

```
<TimeSpan Type="Object" Class ="TimeSpanTrack">
  <Name Type="String">Samples in use</Name>
   <Comment Type="String">
      Confirmation of loading instruction until transfer of first sample (from any input plate)
  </Comment>
   <Begin Type="DateTime">20111108 14:47:13.236</Begin>
  <End Type="DateTime">20111108 14:47:59.752</End>
  <Limit Type="Int">43200</Limit>
  <LimitHrs Type="Int">12</LimitHrs>
  <LimitMin Type="Int">0</LimitMin>
  <LimitSec Type="Int">0</LimitSec>
  <Duration Type="Int">46</Duration>
  <DurationHrs Type="Int">0</DurationHrs>
  <DurationMin Type="Int">0</DurationMin>
  <DurationSec Type="Int">46</DurationSec>
</TimeSpan>
```

Table 25. Description of TimeSpan (level 2) parameters

Parameter	Dimension	Range	Description
Name	String	–	Name used to identify the time span.
Comment	String	–	Detailed description of the extent of this time span.
Begin	DateTime	–	Date and time when the time span began.
End	DateTime	–	Date and time when the time span ended. If the time span is ongoing, this field is empty.
Limit	Int (seconds)	Non-negative	Maximum time allowed for the time span. Zero equals no limit.
LimitHrs	Int (hours)	–	Limit in hours.
LimitMin	Int (minutes)	0..59	Limit in minutes.
LimitSec	Int (seconds)	0..59	Limit in seconds.
Duration	Int (seconds)	Non-negative	Actual time elapsed during the time span. Zero means that the time span is ongoing.
DurationHrs	Int (hours)	–	Duration in hours.
DurationMin	Int (minutes)	0..59	Duration in minutes.
DurationSec	Int (seconds)	0..59	Duration in seconds.
Duration	Int (seconds)	Non-negative	Actual time elapsed during the time span. Zero means that the time span is ongoing.

WorklistNames

The "WorklistNames" element provides the names of any work lists that were used in the assay run.

Example 23. WorklistNames element in *.xml format

```
<WorklistNames Type="Object" Class ="WorklistNames">
  <WorklistName Type="String">RNA</WorklistName>
</WorklistNames>
```

Table 26. Description of WorklistNames parameters

Parameter	Dimension	Range	Description
WorklistName	String	–	Name of one work list.

InputPlateTrack

The "InputPlateTrack" element provides information about one elution rack. This element does not describe the individual samples in the elution rack.

Example 24. InputPlateTrack element in *.xml format

```
<InputPlateTrack Type="Object" Class ="InputPlateTrack">
  <SlotName Type="String">2</SlotName>
  <PlateId Type="String">S2_1000093_0000sim</PlateId>
  <Racktype Type="String">QIA#19585 *S-Block96</Racktype>
  <LabwareCategory Type="String">Deep Well</LabwareCategory>
  <AdapterName Type="String">96-Well Round Bottom QS</AdapterName>
  <Platefile Type="String">
      c:/Dev/xNASoftware/4_BRA/data/RackFiles/RackFile_S2_Xw==_1000093_Xw==_0000sim.xml
  </Platefile>
  <PlatefileSignatureState Type="String">signed</PlatefileSignatureState>
  <RackFileCreated Type="Bool">1</RackFileCreated>
</InputPlateTrack>
```

Table 27. Description of InputPlateTrack parameters

Parameter	Dimension	Range	Description
SlotName	String	2 | 1	Name of the slot on which the rack was placed.
PlateId	String	–	Rack ID.
Racktype	String	–	Labware type.
LabwareCategory	String	–	Category of labware used.
AdapterName	String	–	Adapter used.
Platefile	String	–	Name of the rack file used to define the rack. If the sample rack was defined manually, this field is empty.
Platefile SignatureState	String	(empty) | signature valid | signature invalid | unsigned	Validity of rack file signature. If the rack was defined manually, this field is empty.
RackFileCreated	Bool	[0, 1]	"1" indicates the QIAsymphony AS created a new rack file that defines the rack. "0" indicates no rack file was created for this rack.

OutputPlateTrack

An "OutputPlateTrack" element provides information about one assay rack.

Example 25. OutputPlateTrack element in *.xml format

```
<OutputPlateTrack Type="Object" Class ="OutputPlateTrack">
  <SlotName Type="String">5</SlotName>
  <PlateID Type="String">S5_3000113_0000sim</PlateID>
  <Racktype Type="String">AB#0600 *PCR96</Racktype>
  <Labware Type="String"></Labware>
  <NumberOfWells Type="Int">96</NumberOfWells>
  <NofRows Type="Int">8</NofRows>
  <NofCols Type="Int">12</NofCols>
  <IsHeterogenous Type="Bool">0</IsHeterogenous>
  <TimeSpans Type="Object" Class ="TimeSpanTrackList">
  </TimeSpans>
  <AssayPointTrack Type="Object" Class ="AssayPointTrack">
      <OutputPosition Type="String">A:1</OutputPosition>
      <SampleID Type="String">Pos. Control 1</SampleID>
      <SampleType Type="String">Assay Control</SampleType>
      <OriginalSampleType Type="String">Assay Control</OriginalSampleType>
      <ContainsMMXIC Type="Bool">1</ContainsMMXIC>
      <AssayContainsMMXIC Type="Bool">1</AssayContainsMMXIC>
      <InputSlot Type="String">3</InputSlot>
      <InputPosition Type="String">B5</InputPosition>
      <InternalControlName Type="String"></InternalControlName>
      <AssayParameterSetName Type="String">APS_S1_Abgene600Pattern</AssayParameterSetName>
      <WorklistNames Type="Object" Class ="WorklistNames">
      </WorklistNames>
      <AssayDefinitionName Type="String">AD_S1_Abgene600_StandardsSeries</AssayDefinitionName>
      <MMXTransferred Type="String">done</MMXTransferred>
      <EluateTransferred Type="String">done</EluateTransferred>
      <SampleState Type="String">empty</SampleState>
      <AssayPointState Type="String">valid</AssayPointState>
      <Concentration Type="String">50</Concentration>
      <ConcentrationFormatted Type="String">50</ConcentrationFormatted>
      <ConcentrationUnit Type="String">CUnit</ConcentrationUnit>
      <TemplateVolume Type="String">100.0</TemplateVolume>
      <DiluentVolume Type="String">-1.0</DiluentVolume>
      <DiluentTransferred Type="String">-</DiluentTransferred>
      <SampleTransferVolume Type="String">0.0</SampleTransferVolume>
      <BufferVolume Type="String">0.0</BufferVolume>
  </AssayPointTrack>
  <AssayPointTrack Type="Object" Class ="AssayPointTrack">
      ...
  </AssayPointTrack>
  <AssayPointTrack Type="Object" Class ="AssayPointTrack">
      ...
  </AssayPointTrack>
  <AdapterName Type="String">PCR Plate 96 QS</AdapterName>
  <IsSegmented Type="Bool">0</IsSegmented>
  <NumberOfSegments Type="UInt">0</NumberOfSegments>
  <FirstAssayPoint Type="String"></FirstAssayPoint>
  <LastAssayPoint Type="String"></LastAssayPoint>
  <CyclerFileNames Type="Object" Class ="CyclerFileNames">
      <CyclerFileName Type="String">
          c:/Dev/xNASoftware/4_BRA/log/CyclerExport/
          CyclerFile_20111130_092226_3000113_ABI_S5_3000113_0000sim.txt
      </CyclerFileName>
  </CyclerFileNames>
</OutputPlateTrack>
```

Table 28. Description of OutputPlateTrack parameters

Parameter	Dimension	Range	Description
SlotName	String	4..6	Name of the slot on which this rack was placed.
PlateID	String	–	Rack ID.
Racktype	String	–	Labware type.
Labware	String	–	If the labware of this rack is segmented, the plasticware to be placed on the rack.
NumberOfWells	Int	Non-negative	Number of wells.
NofRows	Int	(–1, positive)	For racks whose wells are laid out in rows and columns; number of rows. For other racks, –1.
NofCols	Int	(–1, positive)	For racks whose wells are laid out in rows and columns; number of columns. For other racks, –1.
IsHeterogenous (new)	Bool	[1, 0]	Type of rack (homogeneous or heterogeneous).
TimeSpans	Object (Class="TimeSpanTrackList")	–	Applicable time spans. See "TimeSpans (level 2)", page 61.
AssayPointTrack	Object	–	One position on this rack. See "AssayPointTrack", page 68.
AdapterName	String	–	Name of adapter used.
IsSegmented	Bool	0 | 1	Labware segmented or not.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
NumberOf Segments	UInt	–	If the labware type of this rack is segmented, the number of segments that must be put on the rack. Otherwise, 0.
FirstAssayPoint	String	(empty) | (a valid position on this rack)	If the labware type of the rack is segmented, the first position on this rack that is filled. Otherwise, empty.
LastAssayPoint	String	(empty) | (a valid position on this rack)	If the labware type of the rack is segmented, the last position on this rack that is filled. Otherwise, empty.
CyclerFileNames	Object	–	The list of cycler files generated for this rack, if any. See "CyclerFileNames", page 74.

AssayPointTrack

The “AssayPointTrack” element provides information about one position on the assay rack and the liquids that are contained in this position.

Example 26. AssayPointTrack element in *.xml format

```
<AssayPointTrack Type="Object" Class ="AssayPointTrack">
  <OutputPosition Type="String">A:1</OutputPosition>
  <SampleID Type="String">Pos. Control 1</SampleID>
  <SampleType Type="String">Assay Control</SampleType>
  <OriginalSampleType Type="String">Assay Control</OriginalSampleType>
  <ContainsMMXIC Type="Bool">1</ContainsMMXIC>
  <AssayContainsMMXIC Type="Bool">1</AssayContainsMMXIC>
  <InputSlot Type="String">3</InputSlot>
  <InputPosition Type="String">B5</InputPosition>
  <InternalControlName Type="String"></InternalControlName>
  <AssayParameterSetName Type="String">APS_S1_Abgene600Pattern</AssayParameterSetName>
  <WorklistNames Type="Object" Class ="WorklistNames">
  </WorklistNames>
  <AssayDefinitionName Type="String">AD_S1_Abgene600_StandardsSeries</AssayDefinitionName>
  <MMXTransferred Type="String">done</MMXTransferred>
  <EluateTransferred Type="String">done</EluateTransferred>
  <SampleState Type="String">empty</SampleState>
  <AssayPointState Type="String">valid</AssayPointState>
  <Concentration Type="String">50</Concentration>
  <ConcentrationFormatted Type="String">50</ConcentrationFormatted>
  <ConcentrationUnit Type="String">CUnit</ConcentrationUnit>
  <TemplateVolume Type="String">100.0</TemplateVolume>
  <DiluentVolume Type="String">-1.0</DiluentVolume>
  <DiluentTransferred Type="String">-</DiluentTransferred>
  <SampleTransferVolume Type="String">0.0</SampleTransferVolume>
  <BufferVolume Type="String">0.0</BufferVolume>
</AssayPointTrack>
```

Table 29. Description of AssayPointTrack parameters

Parameter	Dimension	Range	Description
OutputPosition	String	A valid position on the rack	Position of assay point on assay rack.
SampleID	String	–	Name of sample or control as defined manually or by a rack file.
SampleType	String	Sample | Internal Control | Standard | Positive Extraction Control | Negative Extraction Control | Assay Control | Non Template Control	Type of assay point.
OriginalSampleType	String	Sample | Internal Control | Standard | Positive Extraction Control | Negative Extraction Control | Assay Control | Non Template Control	Original type of assay point. Differs from "SampleType" field only if the "SampleType" is "Sample", an assay rack file was selected as input plate, and the original type of related sample was Standard, Assay Control, or Non-Template Control.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
ContainsMMXIC	Bool	[1, 0]	Whether the master mix used contains internal control.
AssayContains MMXIC	Bool	[1, 0]	Whether the assay uses a master mix with internal control.
InputSlot (updated)	String	1, 2, 3, 6	Slot from which the template was taken. InputSlot = 6 when normalization rack is used.
InputPosition	String	(a valid position on the source rack)	Position of the template on the source rack.
InternalControl Name	String	–	Name of any internal control already present in the template on the source rack.
AssayParameter SetName	String	–	Name of processed Assay Parameter Set.
WorklistNames	Object	–	Names of any work lists that assigned this sample to its assay parameter set. See "WorklistNames", page 63.
AssayDefinition Name	String	–	Name of Assay Definition used.
MMXTransferred	String	- | done | failed	Whether the master mix was transferred.
EluateTransferred	String	- | done | failed	Whether the template was transferred.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
SampleState (updated)	String	valid | unclear | empty	Validity of the source sample. Normally, this is "valid". However, if rack files are used to define the sample racks, this may be different. Invalid Samples are not assignable and therefore not processed. For standards/controls, this field does not apply and is set to the value "empty".
AssayPointState	String	valid | unclear | invalid	Validity of the result.
Concentration (updated)	String	–	For quantification standards and positive assay controls, the concentration. In assays with normalization defined for all assay points, showing the eluate concentration, not the diluted or target concentration.
ConcentrationFormatted (new)	String	–	Concentration formatted for HTML result file.
ConcentrationUnit	String	–	For quantification standards and positive assay controls, the unit of the concentration value.
StateHistoryItem (zero or more)	Object (Class= "SampleStateItem")	–	History of assay point states. See "StateHistoryItem", page 73.
Message (zero or more)	String	–	Important messages or events affecting the assay point.

Table continued on the next page.

Table continued from the previous page.

Parameter	Dimension	Range	Description
TemplateVolume (new)	Double	–	Volume of the eluate. Format: #.1 µl.
DiluentVolume (new)	Double	–	Volume of the diluent. Format: #.1 µl.
DiluentTransferred (new)	String	- | done | failed	Transfer of diluent. If the assay does not involve diluent transfer, this field is empty.
SampleTransferVolume (new)	Double	–	Transferred sample volume during SP processing. Only set if assay point is set up during integrated run.
BufferVolume (new)	Double	–	Selected buffer volume (depends on selected elution volume) during QIAsymphony SP setup. Only set if assay point is set up during integrated run. **Note**: Buffer volume denotes the volume pipetted into the cartridges after the extraction process is complete. Part of the buffer volume is then pipetted to the eluate rack.

StateHistoryItem

The “StateHistoryItem” element provides information about the change in status of an assay at a particular position in the assay rack.

Example 27. StateHistoryItem element in *.xml format

```
<StateHistoryItem Type="Object" Class ="SampleStateItem">
  <SampleState Type="String">unclear</SampleState>
  <Time Type="DateTime">20111124 10:29:53.934</Time>
  <Command Type="String"></Command>
  <BioFB Type="String"></BioFB>   <Reason Type="String">
      INFO 53404 : AS: [BATCH:] [SAMPLE:] [COMMAND:] - System is paused: Cannot aspirate master mix:
      Not enough liquid available. Slot 3 Pos. B1: Mastermix with IC (Container(s): RxnLeftDrawer$RackCarrier-
      3$B1); Slot 3 Pos. B1 (Container(s): RxnLeftDrawer$RackCarrier-3$B1)
  </Reason>
  <ReasonCode Type="Int">53404</ReasonCode>
</StateHistoryItem>
```

Table 30. Description of StateHistoryItem element

Parameter	Dimension	Range	Description
SampleState	String	valid | unclear | invalid	The state to which the assay point changed.
Time	DateTime	–	Date and time when the state change occurred.
Command	String	–	Name and number of the command that initiated the state change.
BioFB	String	–	Process step during which the state change occurred.
Reason	String	–	Why the state changed.
ReasonCode	Int	–	Error/message code of the reason for the state change.

CyclerFileNames

The “CyclerFileNames” element provides the names of cycler files that were generated in an assay run.

Example 28. CyclerFileNames element in *.xml format

```
<CyclerFileNames Type="Object" Class ="CyclerFileNames">
  <CyclerFileName Type="String">
    c:/Dev/xNASoftware/4_BRA/log/CyclerExport/
    CyclerFile_20111130_092226_3000113_ABI_S5_3000113_0000sim.txt
  </CyclerFileName>
</CyclerFileNames>
```

Table 31. Description of CyclerFileNames parameters

Parameter	Dimension	Range	Description
CyclerFileName	String	–	Path to a cycler file generated by the AS and its name.

ReagentPlateTrack

The “ReagentPlateTrack” element provides information about one reagent adapter.

Example 29. ReagentPlateTrack element in *.xml format

```
<ReagentPlateTrack Type="Object" Class ="ReagentPlateTrack">
  <SlotName Type="String">3</SlotName>
  <Racktype Type="String">Reagent Holder 2 QS</Racktype>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    <Id Type="String">QIA#DilutionBuffer</Id>
    <PositionName Type="String">A1</PositionName>
    <SlotNo Type="Int">3</SlotNo>
    <Position Type="Int">0</Position>
    <Volume Type="Int">2000</Volume>
    <Concentration Type="Double">0</Concentration>
    <ConcentrationUnit Type="String">CUnit</ConcentrationUnit>
    <ConcentrationScientific Type="String">0.00E+00</ConcentrationScientific>
    <Labware Type="String">QIA#997102 *T2.0 ScrewSkirt</Labware>
    <ReagentAssayAssignmentTrack Type="Object" Class ="ReagentAssayAssignmentTrack">
      <AssayParameterSet Type="String">APS_S1_Abgene600Pattern</AssayParameterSet>
      <AssayDefinition Type="String">AD_S1_Abgene600_StandardsSeries</AssayDefinition>
    </ReagentAssayAssignmentTrack>
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    ...
  </ReagentTrack>
  <ReagentTrack Type="Object" Class ="ReagentTrack">
    ...
  </ReagentTrack>
</ReagentPlateTrack>
```

Table 32. Description of ReagentPlateTrack parameters

Parameter	Dimension	Range	Description
SlotName	String	3 | 1	The name of the slot on which this reagent adapter was placed.
Racktype	String	–	The type of reagent adapter.
ReagentTrack (one or more)	Object	–	Describes the content of one reagent well. See “ReagentTrack”, page75.

ReagentTrack

The “ReagentTrack” element provides information about the content of one position on a reagent adapter.

Example 30. ReagentTrack element in *.xml format

```
<ReagentTrack Type="Object" Class ="ReagentTrack">
  <Id Type="String">QIA#DilutionBuffer</Id>
  <PositionName Type="String">A1</PositionName>
  <SlotNo Type="Int">3</SlotNo>
  <Position Type="Int">0</Position>
  <Volume Type="Int">2000</Volume>
  <Concentration Type="Double">0</Concentration>
  <ConcentrationUnit Type="String">CUnit</ConcentrationUnit>
  <ConcentrationScientific Type="String">0.00E+00</ConcentrationScientific>
  <Labware Type="String">QIA#997102 *T2.0 ScrewSkirt</Labware>
  <ReagentAssayAssignmentTrack Type="Object" Class ="ReagentAssayAssignmentTrack">
      <AssayParameterSet Type="String">APS_S1_Abgene600Pattern</AssayParameterSet>
      <AssayDefinition Type="String">AD_S1_Abgene600_StandardsSeries</AssayDefinition>
  </ReagentAssayAssignmentTrack>
</ReagentTrack>
```

Table 33. Description of ReagentTrack parameters

Parameter	Dimension	Range	Description
Id	String	–	The ID of this reagent.
PositionName	String	–	The name of this position on the reagent adapter.
SlotNo	Int	3 | 1	The slot on which the reagent adapter was placed.
Position	Int	–	The numerical index of this position on the reagent adapter.
Volume (updated)	Int	–	Required volume of reagent (rounded up).
Concentration	Double (unit given by element "Concentration Unit")	–	Required concentration for quantification standards and assay controls.
ConcentrationUnit	String	–	Unit of concentration.
Concentration Scientific	String	–	Concentration in scientific notation.
Labware	String	–	Labware (tube type) containing the reagent.
ReagentAssay AssignmentTrack	Object	–	Information about which assays (APS/AD) are assigned to a reagent on a reagent adapter. By default, there is only 1 ReagentAssay AssignmentTrack per reagent. There are >1 ReagentAssay AssignmentTracks within the ReagentTrack for dilution buffer for a multi-assay run with normalization only.

ReagentAssayAssignmentTrack

The “ReagentAssayAssignmentTrack” element contains information about which assays (APS/AD) are assigned to a reagent on a reagent adapter.

Example 31. ReagentAssayAssignmentTrack element in *.xml format

```
<ReagentAssayAssignmentTrack Type="Object" Class ="ReagentAssayAssignmentTrack">
  <AssayParameterSet Type="String">APS_S1_Abgene600Pattern</AssayParameterSet>
  <AssayDefinition Type="String">AD_S1_Abgene600_StandardsSeries</AssayDefinition>
</ReagentAssayAssignmentTrack>
```

Table 34. Description of ReagentAssayAssignmentTrack parameters

Parameter	Dimension	Range	Description
AssayParameterSet	String	–	Name of the assay parameter set that requires this reagent.
AssayDefinition	String	–	Name of the assay definition used by the assay parameter set.

NormalizationPlateTrack

The “NormalizationPlateTrack” element contains information about the used normalization racks.

Example 32. NormalizationPlateTrack element in *.xml format

```
<NormalizationPlateTrack Type="Object" Class ="NormalizationPlateTrack">
  <SlotName Type="String">6</SlotName>
  <RackType Type="String">AB#0600 *PCR96</RackType>
  <AdapterName Type="String">PCR Plate 96 QS</AdapterName>
  <NoOfRows Type="Int">8</NoOfRows>
  <NoOfCols Type="Int">12</NoOfCols>
  <NormalizationPointTrack Type="Object" Class ="NormalizationPointTrack">
      <OutputPosition Type="String">A:1</OutputPosition>
      <SampleID Type="String">C8_S2_1000093</SampleID>
      <SourceConcentration Type="String">500</SourceConcentration>
      <SourceConcentrationFormatted Type="String">500</SourceConcentrationFormatted>
      <EluateSlot Type="String">2</EluateSlot>
      <ElluatePosition Type="String">C:8</ElluatePosition>
      <EluateVolume Type="String">3.0</EluateVolume>
      <DilutionBufferSlot Type="String">3</DilutionBufferSlot>
      <DilutionBufferPosition Type="String">A1</DilutionBufferPosition>
      <DilutionBufferVolume Type="String">47.0</DilutionBufferVolume>
      <DestinationConcentration Type="String">30</DestinationConcentration>
      <DestinationConcentrationFormatted Type="String">30</DestinationConcentrationFormatted>
      <ConcentrationUnit Type="String"> ng/µl</ConcentrationUnit>
      <EluateTransferred Type="String">done</EluateTransferred>
      <DiluentTransferred Type="String">done</DiluentTransferred>
  </NormalizationPointTrack>
  <NormalizationPointTrack Type="Object" Class ="NormalizationPointTrack">
      ...
  </NormalizationPointTrack>
 <NormalizationPointTrack Type="Object" Class ="NormalizationPointTrack">
      ...
  </NormalizationPointTrack>
  <NormalizationPointTrack Type="Object" Class ="NormalizationPointTrack">
      ...
  </NormalizationPointTrack>
  <NormalizationPointTrack Type="Object" Class ="NormalizationPointTrack">
      ...
  </NormalizationPointTrack>
</NormalizationPlateTrack>
```

Table 35. Description of NormalizationPlateTrack parameters

Parameter	Dimension	Range	Description
SlotName	String	–	Normalization plate slot name.
RackType	String	–	Normalization plate rack type.
AdapterName	String	–	Adapter name, if used.
NoOfRows	Int	–1 | positive	For racks whose wells are laid out in rows and columns, the number of rows. For other racks, –1.
NoOfCols	Int	–1 | positive	For racks whose wells are laid out in rows and columns, the number of columns. For other racks, –1.
NormalizationPointTrack (one or more)	Object	–	One position on the normalization plate.

NormalizationPointTrack

The "NormalizationPointTrack" element contains information about one position on the normalization plate.

Example 33. NormalizationPointTrack element in *.xml format

```
<NormalizationPointTrack Type="Object" Class ="NormalizationPointTrack">
  <OutputPosition Type="String">A:1</OutputPosition>
  <SampleID Type="String">C8_S2_1000093</SampleID>
  <SourceConcentration Type="String">500</SourceConcentration>
  <SourceConcentrationFormatted Type="String">500</SourceConcentrationFormatted>
  <EluateSlot Type="String">2</EluateSlot>
  <EluatePosition Type="String">C:8</EluatePosition>
  <EluateVolume Type="String">3.0</EluateVolume>
  <DilutionBufferSlot Type="String">3</DilutionBufferSlot>
  <DilutionBufferPosition Type="String">A1</DilutionBufferPosition>
  <DilutionBufferVolume Type="String">47.0</DilutionBufferVolume>
  <DestinationConcentration Type="String">30</DestinationConcentration>
  <DestinationConcentrationFormatted Type="String">30</DestinationConcentrationFormatted>
  <ConcentrationUnit Type="String"> ng/µl</ConcentrationUnit>
  <EluateTransferred Type="String">done</EluateTransferred>
  <DiluentTransferred Type="String">done</DiluentTransferred>
</NormalizationPointTrack>
```

Table 36. Description of NormalizationPointTrack parameters

Parameter	Dimension	Range	Description
OutputPosition	String	–	Container address on normalization plate.
SampleID	String	–	Sample ID.
SourceConcentration	String	positive | ng/µl	Eluate concentration before normalization.
SourceConcentration Formatted	String	positive | ng/µl	Eluate concentration before normalization in representation for HTML result file.
ElutePosition	String	–	Eluate position on input plate.
EluateVolume	String	positive	Eluate volume. Format: #.1 µl
DilutionBufferSlot	String	1, 3	Dilution buffer slot used.
DilutionBufferPosition	String	–	Position of dilution buffer used.
DilutionBufferVolume	String	positive	Volume of the used dilution buffer. Format: #.1 µl.
DestinationConcentration	String	positive | ng/µl	Eluate concentration after normalization.
DestinationConcentration Formatted	String	positive | ng/µl	Eluate concentration after normalization in representation for HTML result file.
ConcentrationUnit	String	default: ng/µl	Concentration unit.
EluateTransferred	String	- | done | failed	Status of the transfer.
DiluentTransferred	String	- | done | failed	Status of the transfer.

TipUsageInformation

The “TipUsageInformation” element provides information about the calculated number of tips, of a particular type, required for the assay run.

Example 34. TipUsageInformation element in *.xml format

```
<TipUsageInformation Type="Object" Class ="TipUsageInformation">
  <Type Type="String">200 µl</Type>
  <Amount Type="UInt">62</Amount>
</TipUsageInformation>
```

Table 37. Description of TipUsageInformation parameters

Parameter	Dimension	Range	Description
Type	String	–	Type of tip used.
Amount	UInt	–	Number of tips used. This number is the original estimate, not the actual number of tips of this type used during the run.

AssayInfoTrack

The “AssayInfoTrack” element provides information about one assay in the assay run.

Example 35. AssayInfoTrack element in *.xml format

```
<AssayInfoTrack Type="Object" Class ="AssayInfoTrack">
  <AssayInfoId Type="String">3000113_2</AssayInfoId>
  <AssayParameterSetName Type="String">APS_S1_Abgene600Pattern</AssayParameterSetName>
  <Author Type="String">Demo Author</Author>
  <Version Type="String">1.1</Version>
  <ChangeDate Type="DateTime">20090216 00:00:00.000</ChangeDate>
  <AssayParameterSetFormatVersion Type="Int">1</AssayParameterSetFormatVersion>
  <AssayDefinitionName Type="String">AD_S1_Abgene600_StandardsSeries</AssayDefinitionName>
  <AssayDefinitionVersion Type="String">1</AssayDefinitionVersion>
  <NumberOfSamplesWithoutControls Type="UInt">10</NumberOfSamplesWithoutControls>
  <AssayParameterSetAuthentic Type="Bool">1</AssayParameterSetAuthentic>
  <AssayDefinitionAuthentic Type="Bool">0</AssayDefinitionAuthentic>
  <AssayDefinitionIVD Type="Bool">0</AssayDefinitionIVD>
  <CyclerCategory Type="String">MyCyclerGroup</CyclerCategory>
  <KitBarcode Type="String"></KitBarcode>
  <ProductCode Type="String"></ProductCode>
  <LotNumber Type="String"></LotNumber>
  <ExpiryDate Type="DateTime"></ExpiryDate>
  <Outdated Type="Bool">0</Outdated>
  <EluateVolume Type="CVolume">30.0</EluateVolume>
  <MMXVolume Type="CVolume">50.0</MMXVolume>
  <ContainsMMXIC Type="Bool">1</ContainsMMXIC>
  <CurrentParameters Type="Object" Class ="AssayInfoParametersTrack">
      ...
  </CurrentParameters>
  <TimeSpans Type="Object" Class ="TimeSpanTrackList">
      ...
  </TimeSpans>
  <CyclerFileFormat Type="String">ABI</CyclerFileFormat>
  <NormalizationDefinitionName Type="String">ND_Default</NormalizationDefinitionName>
  <NormalizationRackType Type="String">AB#0600 *PCR96</NormalizationRackType>
  <TargetConcentration Type="String">30</TargetConcentration>
  <TargetConcentrationFormatted Type="String">30</TargetConcentrationFormatted>
  <MinimumTargetConcentration Type="String">10</MinimumTargetConcentration>
  <MinimumTargetConcentrationFormatted Type="String">10</MinimumTargetConcentrationFormatted>
  <MaximumTargetConcentration Type="String">50</MaximumTargetConcentration>
  <MaximumTargetConcentrationFormatted Type="String">50</MaximumTargetConcentrationFormatted>
  <UsesNormalization Type="Bool">1</UsesNormalization>
  <Dyes Type="Object" Class ="DyeTrackList">
  </Dyes>
  <StandardCurveTrack Type="Object" Class ="StandardCurveTrack">
      ...
  </StandardCurveTrack>
</AssayInfoTrack>
```

Table 38. Description of AssayInfoTrack parameters

Parameter	Dimension	Range	Description
AssayInfoId	String	–	ID of the AssayInfo object.
AssayParameterSetName	String	Maximum length is restricted so that the full APS name is visible in the QIAsymphony GUI. When using the narrowest character ("l"), the maximum length is 87 characters.	Name of the assay parameter set.
Author	String	–	Author of the APS.
Version	String	–	Version of the APS.
ChangeDate	DateTime	–	When the APS was last changed.
AssayParameterSetFormatVersion	Int	1	Version of the APS format.
NumberOfSamplesWithoutControls	UInt	–	Number of samples, excluding controls, processed by this APS.
AssayParameterSetAuthentic	Bool	[1, 0]	Certifies APS provided by QIAGEN.
AssayDefinitionAuthentic	Bool	[1, 0]	Certifies AD provided by QIAGEN.

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Parameter	Dimension	Range	Description
AssayDefinitionIVD	Bool	[1, 0]	The value of the IvD element taken from the header of the AD.
CyclerCategory	String	–	Cycler group of the AD.
KitBarcode	String	–	Bar code of the reagent kit used for this assay, if any.
ProductCode	String	–	Product code, taken from the kit bar code. This field is empty, if no kit bar code was read or if the bar code format was not recognized.
LotNumber	String	–	Lot number, taken from the kit bar code. This field is empty, if no kit bar code was read or if the bar code format was not recognized.
ExpiryDate	DateTime	–	Expiration date of the reagent kit, if any, taken from the kit bar code. This field is empty, if no kit bar code was read or if the bar code format was not recognized.
Outdated	Bool	[1, 0]	Indicates whether the expiration date of the reagent kit has been exceeded.
EluateVolume	CVolume	–	Template volume (for all assay points), i.e., amount of eluate transferred into each assay point. **Note**: The total volume in each assay point is shown as the sum of EluateVolume and MMXVolume.
MMXVolume	CVolume	–	Master mix volume (for all assay points).
ContainsMMXIC	Bool	[1, 0]	Indicates whether the assay uses a master mix with internal control.

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Parameter	Dimension	Range	Description
CurrentParameters	Object (Class= "Assay Info Parameters Track")	–	The assay parameters used for this run. See "CurrentParameters", page 87.
TimeSpans	Object (Class="Time SpanTrack List")	–	Time spans that apply to this assay. See "TimeSpans (level 1)", page 60.
CyclerFileFormat	String	–	Cycler file format, set in the APS.
Normalization DefinitionName (new)	String	–	Name of the normalization definition.
NormalizationRackType (new)	String	–	Rack type for the normalization.
TargetConcentration (new)	String	>0	Concentration for the result.
TargetConcentration Formatted (new)	String	>0	As per TargetConcentration, but formatted in decimal or scientific notation (depending on the number of significant digits).
MinimumTarget Concentration (new)	String	>= 0, <= Target Conc entration	Minimum concentration for the result.
MinimumTarget ConcentrationFormatted (new)	String	>= 0, <= Target Conc entration	As per MinimumTarget Concentration, but formatted in decimal or scientific notation (depending on the number of significant digits).

Table continued on next page.

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Parameter	Dimension	Range	Description
MaximumTarget Concentration (new)	String	> 0, >= Target Conc-entration	Maximum concentration for the result.
MaximumTarget ConcentrationFormatted (new)	String	–	As per MaximumTargetAs perConcentration, but formatted in decimal or scientific notation (depending on the number of significant digits).
UsesNormalization (new)	Bool	[1, 0]	"1" if the user applies normalization; "0" otherwise (i.e., no normalization).
Dyes (updated)	Object (Class=" DyeTrackList")	–	List of dyes specified in the AD file. This list may have been overwritten by the APS.
StandardCurveTrack (optional) (new)	Object	–	Information about the standard series created for this assay, if any. See "StandardCurveTrack", page 91.

CurrentParameters

The “CurrentParameters” element provides information about the assay parameters that were used during the assay run.

Example 36. CurrentParameters element in *.xml format

```
<CurrentParameters Type="Object" Class ="AssayInfoParametersTrack">
  <NofReplicates_Samples Type="UInt">1</NofReplicates_Samples>
  <NofReplicates_PosExtractionControls Type="UInt">1</NofReplicates_PosExtractionControls>
  <NofReplicates_NegExtractionControls Type="UInt">1</NofReplicates_NegExtractionControls>
  <PatternBasedPipetting Type="Bool">1</PatternBasedPipetting>
  <NofReplicates_AssayControls Type="UInt">0</NofReplicates_AssayControls>
  <NofReplicates_NonTemplateControlsWithIC Type="UInt">0</NofReplicates_NonTemplateControlsWithIC>
  <NofReplicates_NonTemplateControlsWithoutIC Type="UInt">
      0
  </NofReplicates_NonTemplateControlsWithoutIC>
  <NofReplicates_QuantificationStandards Type="UInt">0</NofReplicates_QuantificationStandards>
  <NofStandards Type="UInt">6</NofStandards>
  <NofAssayControls Type="UInt">1</NofAssayControls>
  <EluatesContainInternalControl Type="Bool">0</EluatesContainInternalControl>
  <ReadyToUseMMX Type="Bool">0</ReadyToUseMMX>
  <StandardSeriesParameters Type="Bool">1</StandardSeriesParameters>
  <CreateStandardSeries Type="Bool">1</CreateStandardSeries>
</CurrentParameters>
```

Table 39. Description of CurrentParameters parameters

Parameter	Dimension	Range	Description
NofReplicates_ Samples	UInt	–	Replicates for samples.
NofReplicates_Pos ExtractionControls	UInt	–	Replicates for positive extraction controls.
NofReplicates_Neg ExtractionControls	UInt	–	Replicates for negative extraction controls.
PatternBasedPipetting (new)	Bool	[1, 0]	"1" if assay uses "User-defined output pattern"; "0" otherwise.
NofReplicates_Assay Controls	UInt	–	Replicates for assay positive controls.
NofReplicates_Non TemplateControls WithIC	UInt	–	Replicates for assay no template controls (with master mix with IC).
NofReplicates_Non TemplateControls WithoutIC	UInt	–	Replicates for assay no template controls (with master mix without IC).
NofReplicates_ Quantification Standards	UInt	–	Replicates for assay standards.
NofStandards	UInt	–	Number of assay standards.
NofAssayControls	UInt	–	Number of positive controls.
EluatesContain InternalControl	Bool	[1, 0]	Indicates whether the samples on the source rack(s) contain assay-specific internal control.
ReadyToUseMMX	Bool	[1, 0]	Indicates whether the assay uses ready-to-use master mix.
StandardSeries Parameters (new)	Bool	[1, 0]	Specifies if assay definition contains parameters for standard series creation.
CreateStandardSeries (new)	Bool	[1, 0]	Specifies if a standard series is created. Only valid if assay definition contains parameters for standard series creation.

Dyes

The “Dyes” element provides information about the specified dyes in the Assay Definition file.

Example 37. Dyes element in *.xml format

```
<Dyes Type="Object" Class ="DyeTrackList">
  <DyeTrack Type="Object" Class ="DyeTrack">
      …
  </DyeTrack>
  <DyeTrack Type="Object" Class ="DyeTrack">
      …
  </DyeTrack>
</Dyes>
```

Table 40. Description of Dyes parameters

Parameter	Dimension	Range	Description
DyeTrack	Object (Class "DyeTrackList")	–	List of dyes specified in the Assay Definition file. This list may have been overwritten by the Assay Parameter Set.

DyeTrack

The “DyeTrack” element provides information about the specified dyes in the Assay Definition file.

Example 38. DyeTrack element in *.xml format

```
<DyeTrack Type="Object" Class ="DyeTrack">
  <DyeName Type="String">Dye 1</DyeName>
</DyeTrack>
<DyeTrack Type="Object" Class ="DyeTrack">
  <DyeName Type="String">Det1</DyeName>
  <ABIInfo Type="Object" Class ="ABIDyeTrack">
      <Detector Type="String">Det1</Detector>
      <Reporter Type="String">Rep1</Reporter>
      <Quencher Type="String">Quench1</Quencher>
      <Description Type="String">Desc</Description>
      <Comments Type="String">Comm</Comments>
      <Sequence Type="String">Seq</Sequence>
  </ABIInfo>
</DyeTrack>
```

Table 41. Description of DyeTrack parameters

Parameter	Dimension	Range	Description
DyeName	String	–	Dye name.
ABIInfo (optional)	Object (Class="ABIDyeTrack")	–	If the APS holding this dye targets ABI cyclers, this tag contains specific information for the ABI cycler software.

ABIInfo

The "ABIInfo" element provides specific information for the ABI cycler software.

Example 39. ABIInfo element in *.xml format

```
<ABIInfo Type="Object" Class ="ABIDyeTrack">
   <Detector Type="String">Det1</Detector>
   <Reporter Type="String">Rep1</Reporter>
   <Quencher Type="String">Quench1</Quencher>
   <Description Type="String">Desc</Description>
   <Comments Type="String">Comm</Comments>
   <Sequence Type="String">Seq</Sequence>
</ABIInfo>
```

Table 42. Description of ABIInfo parameters

Parameter	Dimension	Range	Description
Detector	String	–	Identifying name of dye.
Reporter	String	–	Dye to be detected.
Quencher	String	–	Name of quencher.
Description	String	–	Additional optional attribute.
Comments	String	–	Additional optional attribute.
Sequence	String	–	Additional optional attribute.

StandardCurveTrack

The “StandardCurveTrack” element provides information about the standard series created for this assay.

Example 40. StandardCurveTrack element in *.xml format

```
<StandardCurveTrack Type="Object" Class ="StandardCurveTrack">
  <NameOfStandardCurve Type="String">TestStandardSeries</NameOfStandardCurve>
  <AssayParameterSetName Type="String">APS_S1_Abgene600Pattern</AssayParameterSetName>
  <DilutionFactor Type="String">1:10</DilutionFactor>
  <NoOfDilutionConcentration Type="UInt">5</NoOfDilutionConcentration>
  <StandardCurvePointTrack Type="Object" Class ="StandardCurvePointTrack">
      ...
  </StandardCurvePointTrack>
  <StandardCurvePointTrack Type="Object" Class ="StandardCurvePointTrack">
      ...
  </StandardCurvePointTrack>
</StandardCurveTrack>
```

Table 43. Description of StandardCurveTrack parameters

Parameter	Dimension	Range	Description
NameOfStandardCurve	String	–	Name of this standard series, as defined in the APS.
AssayParameterSetName	String	–	Name of the APS in which this standard series was defined. Same as the name in the parent AssayInfoTrack element.
DilutionFactor	String	–	Dilution factor by which the concentrations of 2 successive standards in the series are related, as defined in the APS. Example: 1:100.
NoOfDilution Concentration	UInt	–	Total number of dilution concentrations in the series, including the first undiluted standard.
StandardCurvePoint Track (multiple)	Object	–	Detailed information about each dilution concentration. See “StandardCurvePoint Track”, page 92.

StandardCurvePointTrack

The “StandardCurvePointTrack” element contains detailed information about each dilution concentration.

Example 41. StandardCurvePointTrack element in *.xml format

```
<StandardCurvePointTrack Type="Object" Class ="StandardCurvePointTrack">
   <ReagentAdapterSlot Type="String">3</ReagentAdapterSlot>
   <ReagentAdapterPos Type="String">B3</ReagentAdapterPos>
   <StandardName Type="String">TestStandardSeries-1</StandardName>
   <StandardVolume Type="String">159.2</StandardVolume>
   <DiluentName Type="String">H2O</DiluentName>
   <DiluentVolume Type="String">0.0</DiluentVolume>
   <DilutionRatio Type="String">1:10</DilutionRatio>
   <Concentration Type="String">30</Concentration>
   <ConcentrationFormatted Type="String">30</ConcentrationFormatted>
   <ConcentrationUnit Type="String">CUnit</ConcentrationUnit>
</StandardCurvePointTrack>
```

Table 44. Description of StandardCurvePointTrack parameters

Parameter	Dimension	Range	Description
ReagentAdapterSlot	String	1 | 3	Reagent slot on which the dilution concentration was prepared.
ReagentAdapterPos	String	–	Container position on the reagent adapter in which the standard was placed by the operator or created by the QIAsymphony AS, respectively.
StandardName	String	–	Name by which this standard is referenced in the AssayPointTrack elements.
StandardVolume	String	–	Volume of the predecessor in the standard series transferred to this container. For the operator-provided standard, the total volume instead. Example: 100.0.
DiluentName	String	–	Liquid name of the diluent used for this dilution concentration, as defined in the assay definition.

Table continued on next page.

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Parameter	Dimension	Range	Description
DiluentVolume	String	–	Volume (in µl) of the diluent transferred to this container. Example: 342.5.
DilutionRatio	String	–	Dilution ratio, i.e., ratio of the concentration of the preceding standard and this standard. For the operator-provided standard, "None" instead. Example: 1:100.
Concentration	String (unit given by element "ConcentrationUnit")	–	Concentration.
ConcentrationFormatted	String		The concentration formatted for HTML result file.
ConcentrationUnit	String		Concentration unit.

Message

The “Message” element provides information about error or information messages that occurred during the assay run.

Example 42. Message element in *.xml format

```
<Message Type="Object" Class ="ProcEventEssentials">
  <MessageId Type="Int">268011</MessageId>
  <MessageText Type="String">
      No kit barcode has been scanned, but the user still wants to use the kit.
  </MessageText>
  <Timestamp Type="DateTime">20111130 09:22:26.199</Timestamp>
  <CommandName Type="String"></CommandName>
</Message>
<Message Type="Object" Class ="ProcEventEssentials">
  <MessageId Type="Int">30603</MessageId>
  <MessageText Type="String">Batch state changed, batch finished</MessageText>
  <Timestamp Type="DateTime">20111130 09:23:50.049</Timestamp>
  <CommandName Type="String"></CommandName>
</Message>
<Message Type="Object" Class ="ProcEventEssentials">
  <MessageId Type="Int">269000</MessageId>
  <MessageText Type="String">Output rack was removed from slot 5.</MessageText>
  <Timestamp Type="DateTime">20111130 09:24:08.800</Timestamp>
  <CommandName Type="String"></CommandName>
</Message>
```

Table 45. Description of Message parameters

Parameter	Dimension	Range	Description
MessageId	Int	–	Error/message code.
MessageText	String	–	Error/message text.
Timestamp	DateTime	–	When this error occurred or this message was generated.
CommandName	String	–	If the error or message is related to a specific script command, this element contains the name of that command.

AdditionalReagentTrack

The "AdditionalReagentTrack" element provides information about the components of the ready-to-use master mix. If ready-to-use master mix was not used, this element is not present.

Example 43. AdditionalReagentTrack element in *.xml format

```
<AdditionalReagentTrack Type="Object" Class ="AdditionalReagentTrack">
  <AssayParameterSetName Type="String">600_Dye1</AssayParameterSetName>
  <MasterMixName Type="String">Mastermix without IC</MasterMixName>
  <MasterMixTotalVolume Type="Double">154.4</MasterMixTotalVolume>
  <ReagentsMapPair Type="Object" Class ="ReagentsMapPair">
      ...
  </ReagentsMapPair>
  <ReagentsMapPair Type="Object" Class ="ReagentsMapPair">
      ...
  </ReagentsMapPair>
</AdditionalReagentTrack>
```

Table 46. Description of AdditionalReagentTrack parameters

Parameter	Dimension	Range	Description
AssayParameterSet Name	String	–	APS that uses the master mix.
MasterMixName	String	–	Name of the master mix.
MasterMixTotal Volume	Double	–	How much of this master mix is required.
ReagentsMapPair (one or more)	Object	–	One ingredient for this master mix. See "ReagentsMapPair", page 95.

ReagentsMapPair

The "ReagentsMapPair" element provides information about one component of the ready-to-use master mix.

Example 44. ReagentsMapPair element in *.xml format

```
<ReagentsMapPair Type="Object" Class ="ReagentsMapPair">
  <ReagentName Type="String">Reagent1</ReagentName>
  <ReagentVolume Type="Double">85.3</ReagentVolume>
</ReagentsMapPair>
```

Table 47. Description of ReagentsMapPair element

Parameter	Dimension	Range	Description
ReagentName	String	–	The name of the reagent.
ReagentVolume	Double	–	How much of the reagent is required.

TemperatureMeasurementsTrack

The "TemperatureMeasurementsTrack" provides information about all temperature measurements that were taken during the assay run.

Example 45. TemperatureMeasurementsTrack element in *.xml format

```
<TemperatureMeasurementsTrack Type="Object" Class ="TemperatureMeasurementsTrack">
  <Timestamp Type="DateTime">20101202 11:01:15.499</Timestamp>
  <TemperatureTrack Type="Object" Class ="TemperatureTrack">
      ...
  </TemperatureTrack>
  <TemperatureTrack Type="Object" Class ="TemperatureTrack">
      ...
  </TemperatureTrack>
  <TemperatureTrack Type="Object" Class ="TemperatureTrack">
      ...
  </TemperatureTrack>
</TemperatureMeasurementsTrack>
```

Table 48. Description of TemperatureMeasurementsTrack parameters

Parameter	Dimension	Range	Description
Timestamp	DateTime	–	Time the temperatures were measured.
TemperatureTrack (one or more)	Object	–	The temperature on one slot. See "TemperatureTrack", page 97.

TemperatureTrack

The “TemperatureTrack” element provides information about the temperature measurements that were taken for a particular slot during the assay run.

Example 46. TemperatureTrack element in *.xml format

```
<TemperatureTrack Type="Object" Class ="TemperatureTrack">
  <SlotName Type="String">2</SlotName>
  <Temperature Type="Double">10</Temperature>
  <Valid Type="Bool">1</Valid>
</TemperatureTrack>
<TemperatureTrack Type="Object" Class ="TemperatureTrack">
  <SlotName Type="String">3</SlotName>
  <Temperature Type="Double">10</Temperature>
  <Valid Type="Bool">1</Valid>
</TemperatureTrack>
```

Table 49. Description of TemperatureTrack parameters

Parameter	Dimension	Range	Description
SlotName	String	1..6	The slot whose temperature was measured.
Temperature	Double (degrees Celsius)	–	Temperature.
Valid	Bool	[1, 0]	“1” = The temperature was measured. “0” = This entry is a placeholder.

Work List File

Work list files can be generated manually or using LIMS. They are then transferred to the QIAsymphony SP/AS instruments in ***.xml** format. Work list files link samples to a particular Assay Control Set and/or Assay Parameter Set(s), and therefore provide information to the QIAsymphony SP/AS instruments during run definition. Optionally, work list files may specify some further restrictions on the run parameters. See the description of the WorklistEntry element for details.

A work list file in ***.xml** format consists of a number of elements. "Worklist" is the root element that contains all other elements of the work list file. Each element consists of parameters that provide information about a particular feature of the work list file (see Table 50). Example 47 shows a complete work list file. The following sections describe each element in more detail.

Note: For a description of how to create work list files, please refer to the worklist tool that is offered by QIAGEN.

Example 47. Work list file in *.xml format

```
<?xml version="1.0" encoding="UTF-8"?>
<Worklist Type="Object" Class ="Worklist">
<SerializeVersion Type="UInt">1</SerializeVersion>
<WorklistEntries Type="Object" Class = "WorklistEntries">
  <WorklistEntry Type="Object" Class = "WorklistEntry" >
      ...
  </WorklistEntry>
</WorklistEntries>
</Worklist>

<!-- QIAsymphony_CHECKSUM 6qrxnDEPqVIkLP54YiAl8jnxGTpgZXAOjFtoFb8Oyn8=-->
```

Table 50. Description of work list file elements

Element	Level	Description
Worklist	Root element	Provides information about all work list entries within a work list.
WorklistEntries	1	Contains the individual "WorklistEntry" elements.
WorklistEntry	2	Provides information about the assignment of a sample to an Assay Control Set or an Assay Parameter Set.

Example 48. Work list file root element in *.xml format

```
<?xml version="1.0" encoding="UTF-8"?>
<Worklist Type="Object" Class ="Worklist">
 ...
</Worklist>
```

Table 51. Description of work list file root element

Parameter	Dimension	Range	Description
Worklist	Object	–	See “Worklist” (below).

Worklist

The “Worklist” element provides information about all work list entries within a work list.

Example 49. Worklist element in *.xml format

```
<Worklist Type="Object" Class ="Worklist">
<SerializeVersion Type="UInt">1</SerializeVersion>
<WorklistEntries Type="Object" Class = "WorklistEntries">
 ...
</WorklistEntries>
</Worklist>
```

Table 52. Description of Worklist parameters

Parameter	Dimension	Range	Description
SerializeVersion	UInt	0 to infinity (default=1)	Version number of the file format used. Files with an unsupported version number cannot be used.
WorklistEntries	Object	–	Entries in the work list. See “WorklistEntries”, page 100.

WorklistEntries

The “WorklistEntries” element contains the individual “WorklistEntry” elements.

Example 50. WorklistEntries element in *.xml format

```
<WorklistEntries Type="Object" Class ="WorklistEntries">
  <WorklistEntry Type="Object" Class ="WorklistEntry">
      …
  </WorklistEntry>
  <WorklistEntry Type="Object" Class ="WorklistEntry">
      …
  </WorklistEntry>
</WorklistEntries>
```

Table 53. Description of WorklistEntries parameters

Parameter	Dimension	Range	Description
WorklistEntry	Object	–	See “WorklistEntry”, (below).

WorklistEntry

The “WorklistEntry” element provides information about the assignment of a sample to an Assay Control Set or an Assay Parameter Set. Depending on the software configuration of the QIAsymphony instrument, it may also specify that a sample must be provided in a specific tube type, or that it must be eluted to a specific elution rack.

Example 51. WorklistEntry element in *.xml format

```
<WorklistEntry Type="Object" Class ="WorklistEntry">
  <SampleID Type="String">1000</SampleID>
  <AssayControlSetName Type="String">Virus A</AssayControlSetName>
  <RequiredSPSampleTubeType Type="String"></RequiredSPSampleTubeType>
  <RequiredSPElutionRackID Type="String"></RequiredSPElutionRackID>
  <AssayParameterSetName Type="String">Roche Cobas TaqMan HIV-1_V04</AssayParameterSetName>
</WorklistEntry>
```

Table 54. Description of WorklistEntry parameters

Parameter	Dimension	Range	Description
Sample ID	String	(not empty)	Sample ID (read by the bar code scanner, from a rack file, or entered manually).
AssayControlSet Name	String	(the name of any valid assay control set on the QIAsymphony SP, or empty)	If not empty, requests to process the sample with the given ID with the given assay control set.
RequiredSP SampleTubeType (optional)	String	(the name of a valid sample tube type on the QIAsymphony SP, or empty)	QIAsymphony SP only: If this parameter is not empty, and the QIAsymphony SP is configured in restricted regulative mode, the QIAsymphony SP will check during setup that the sample with the given ID is provided in the given tube type, and if not so, shall not allow processing of this sample. For samples provided in rack carriers, this parameter should be empty.

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Parameter	Dimension	Range	Description
RequiredSPElutionRackID (optional)	String	–	QIAsymphony SP only: If this parameter is not empty, and the QIAsymphony SP is configured in restricted regulative mode, the QIAsymphony SP will check (before starting processing) that the ID of the elution rack used for the sample is the same as the one given here. If not, processing of the sample is not allowed.
AssayParameterSetName	String	(the name or the UID of any valid assay parameter set on the QIAsymphony AS, or empty)	If not empty, requests to process the sample with the given ID with the given assay parameter set.

Rack File

The function of a rack file is to support the plate mode function of the QIAsymphony SP and to enable transfer of rack information to the QIAsymphony SP and from the QIAsymphony SP to the QIAsymphony AS. Rack files can be generated externally and then transferred to the QIAsymphony SP/AS instruments in ***.xml** format, or can be generated by the QIAsymphony SP/AS instruments. See the "CSV Conversion" tool section of the *QIAsymphony Management Console User Manual* for more details about converting files into ***.xml** format.

Note: Automatic transfer of rack files to the QIAsymphony SP/AS instruments is not supported.

A rack file in ***.xml** format consists of a number of elements. "Rack" is the root element that contains all other elements of the rack file. Each element consists of parameters that provide information about a particular feature of the rack file (see Table 55). The following sections describe each element in more detail.

Table 55. Description of rack file elements

Element	Level	Description
Rack	Root element	Provides information about all parameters within the rack file.
RackPosition	1	Provides information about one position on the rack.
Modification Record	1	Provides information about a modification to the rack.

Example 52. Rack file root element in *.xml format

```
<?xml version="1.0" encoding="UTF-8"?>
<Rack Type="Object" Class ="Rack">
        ...
</Rack>

<!-- QIAsymphony_CHECKSUM waLHurXMPSRwaJDg3mhO-->
```

Table 56. Description of rack file root element

Parameter	Dimension	Range	Description
Rack	Object	–	See "Rack", page 104.

Rack

The “Rack” element provides information about all parameters within the rack file.

Example 53. Rack element in *.xml format

```
<Rack Type="Object" Class ="Rack">
  <SerializeVersion Type="Int">2</SerializeVersion>
  <RackId Type="String">38-17_2Step_PCR</RackId>
  <RackLabware Type="String">AB#0600 *PCR96</RackLabware>
  <CreationTimestamp Type="DateTime">20091030 13:34:58.070</CreationTimestamp>
  <RackUsageType Type="String">Assay</RackUsageType>
  <CSVConverted Type="Bool">0</CSVConverted>
  <RackLockType Type="String">NoLock</RackLockType>
  <RackPosition Type="Object" Class ="RackPosition">
      ...
  </RackPosition>
  <RackPosition Type="Object" Class ="RackPosition">
      ...
  </RackPosition>
  <RackPosition Type="Object" Class ="RackPosition">
      ...
  </RackPosition>
  <ModificationRecord Type="Object" Class ="ModificationRecord">
      ...
  </ModificationRecord>
</Rack>
```

Table 57. Description of Rack element parameters

Parameter	Dimension	Range	Description
SerializeVersion	Int	–	Version number of the file format used. Files with an unsupported version number cannot be used.
RackId	String	–	Rack ID.
RackLabware	String	–	Rack type.
Creation Timestamp	DateTime	–	Time of rack file creation. Valid timestamp format: yyyyMMdd HH:mm:ss.zzz or yyyyMMdd HH:mm:ss

Table continued on next page.

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Parameter	Dimension	Range	Description
RackUsageType	String	Sample, Eluate, Assay	Type of rack (i.e., "Sample" for QIAsymphony SP input racks, "Eluate" for QIAsymphony SP output racks and QIAsymphony AS input racks, and "Assay" for QIAsymphony AS output racks).
CSVConverted	Bool	[1, 0]	"1" indicates that the rack file is generated by the QIAsymphony Management Console from a ***.csv** file.
RackLockType	String	Sample Preparation, AssaySetup, QIAsymphony, NoLock	Indicates system that currently uses rack file. In case of a system crash, the crashed system ensures an unlock on restart. "QIAsymphony" indicates shared usage of a rack file by SP and AS.
RackPosition	Object	0..*	A position on the rack. All positions of a rack file are described explicitly regardless of empty state. Rack positions are ordered by number (0-based). See "RackPosition", page 106.
ModificationRecord	Object	0..*	See "ModificationRecord", page 108.

RackPosition

The “RackPosition” element provides information about a single position on the rack.

Example 54. RackPosition element in *.xml format

```
<RackPosition Type="Object" Class ="RackPosition">
  <SampleId Type="String">A1_S2_3000017</SampleId>
  <PositionName Type="String">A:1</PositionName>
  <PositionIndex Type="UInt">0</PositionIndex>
  <Labware Type="String">QIA#19588 EMTR</Labware>
  <TotalVolumeInUl Type="Int">658</TotalVolumeInUl>
  <InternalControlName Type="String"></InternalControlName>
  <State Type="String">valid</State>
  <SampleType Type="String">Sample</SampleType>
  <Concentration Type="Double">0</Concentration>
</RackPosition>
```

Table 58. Description of RackPosition parameters

Parameter	Dimension	Range	Description
SampleId	String	–	Sample ID (read by the bar code scanner from a rack file or entered manually), or name of the extraction control, assay control, or NTC.
PositionName	String	–	Name of the position (generated by QIAsymphony. May be left empty by LIMS/user).
PositionIndex	UInt	0–384 (depending on the number of positions on the rack)	Position on the rack (0-based index).
Labware	String	–	Identification of the LiquidContainerType from QIAGEN labware file (generated by QIAsymphony). May be left empty for LIMS/user created rack files.

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Parameter	Dimension	Range	Description
TotalVolume InUl	Int	(0..15000)	Volume in the current rack position.
Internal ControlName	String		Name of internal control, if any. Only used for eluate and assay racks. Leave empty for sample racks.
State	String	valid, unclear, invalid, empty	The validity of the current rack position.
SampleType	String	Sample, ExtractionControl_Pos, ExtractionControl_Neg, QuantificationStandard, AssayControl, NTC	Sample type. For "Sample" and "Eluate" only Sample, ExtractionControl_Pos and ExtractionControl_Neg are permitted.
Concentration (new)	Double	>=0	Optional concentration value for eluate racks in ng/µl.

ModificationRecord

The “ModificationRecord” element provides information about a modification to the rack.

Example 55. ModificationRecord element in *.xml format

```
<ModificationRecord Type="Object" Class ="ModificationRecord">
  <Timestamp Type="DateTime">20111130 10:46:11.750</Timestamp>
  <BatchID Type="UInt">1000094</BatchID>
  <Instrument Type="String">xnap000</Instrument>
  <Comment Type="String">Assay parameter sets: </Comment>
  <InstrumentType Type="String">AssaySetup</InstrumentType>
</ModificationRecord>
```

Table 59. Description of ModificationRecord parameters

Parameter	Dimension	Range	Description
Timestamp	DateTime	–	Time the rack file was modified.
BatchID	UInt	–	ID of the batch that modified the rack file. “0” in case that no batch was involved.
Instrument	String	–	Name of the instrument that modified the rack file.
Comment	String	–	Description of the modification.
InstrumentType	String	AssaySetup, Sample Preparation, QTW CSV Conversion, Other	Instrument or tool that modified the rack file.

Differences between QIAsymphony software versions 3.5 and 4.0

This section provides an overview of the differences between the software version 3.5 and 4.0. In the previous section, changes have been marked in the parameters column of each table with either "(updated)" or "(new)".

In this section, text that is new or that has been updated can be found in bold type. Deleted text from software version 3.5 is shown, but preceded by "Deleted:".

Differences in QIAsymphony SP Result File

Table 60 refers to changes in Table 3, "QIAsymphony SP result file root element".

Table 60. Changes in QIAsymphony Result file elements

Element	Level	Description
ProcessStepResult**s**	2	Describes the status of the lysis and eluate temperatures during processing of a particular batch.
ProcessStepResult**s**	1	Contains information about the process step (Lysis Temperature, Shaker Speed, Eluate Temperature) and the result.

Differences in FullPlate Track

Table 61 refers to changes in Table 4, “Description of FullPlateTrack parameters”.

Table 61. Changes in QIAsymphony FullPlateTrack parameters

Parameter	Dimension	Range	Description
Deleted:	Deleted:	Deleted:	Deleted:
Mode	String	(Open, Closed)	Not used.
AllSamplesOK	String	**[passed, failed, unclear]**	The status is passed, if all samples that are documented in this result file are "valid". The status is failed, if at least one sample is “invalid”. **The status is unclear, if at least one sample is “unclear” and neither is “invalid”.**
Message	**–**	**–**	**Zero or more. Important messages and events during the run.**

Differences in BatchTrack

Table 62 refers to changes in Table 5, “Description of BatchTrack parameters”.

Table 62. Changes in QIAsymphony BatchTrack parameters

Parameter	Dimension	Range	Description
ScriptVersion	String	Deleted: (1.00)	Deleted: Always 1.00. **Script version of the protocol. May be empty if the script version in the protocol is empty.**

Differences in Message

Table 63 refers to changes in Table 10, “Description of Message parameters”.

Table 63. Changes in QIAsymphony Message parameters

Parameter	Dimension	Range	Description
SampleId	String	(empty) | (a sample ID in the batch) | **(a comma separated list of sample IDs in the batch)**	If the message relates to a specific sample, the element denotes the ID of the sample. **If the timestamp (within a certain range), message ID, message text and command relate to several samples, a comma separated list of affected sample IDs will be generated.**
Sample Position	String	(empty) | (a position on the sample rack) **| (a comma separated list of positions on the sample rack)**	If the message relates to a specific sample, the element denotes the position of the sample on the sample rack. **If the timestamp (within a certain range), message ID, message text and command relate to several samples, a comma separated list of affected sample positions will be generated.**

Differences in AssaySetTrack

Table 64 refers to changes in Table 12, “Description of AssaySetTrack parameters”.

Table 64. Changes in QIAsymphony AssaySetTrack parameters

Parameter	Dimension	Range	Description
ACS Authentic	**String**	**[1,0]**	**Authentic flag that specifies if the assay control set is a genuine QIAGEN file.** **“1” if the ACS is a genuine QIAGEN file, “0” if the ACS is customized file.**

Differences in ReagentRackTrack

Table 65 refers to changes in Table 14, "Description of ReagentRackTrack parameters".

Table 65. Changes in QIAsymphony ReagentRackTrack parameters

Parameter	Dimension	Range	Description
LogicalName	String	**[BufferBottle-1, BufferBottle-2, …]**	**Identifier for the BufferBottle Slot.** **For the first deployed buffer bottle in the buffer bottle slot, the logical name is "BufferBottle-1".** **If that the buffer bottle is exchanged, the number is incremented (e.g., "BufferBottle-2", "BufferBottle-3", etc.).** **This means the number does not identify the slot.**
InternalNo	Int	**For Reagent Boxes [1, 2],** **For BufferBottles [101, 102, …],** **For Accessory Trough [151, 152]**	Deleted: Internal number of reagent rack. Do not use. **Internal number of reagent rack. If using Reagentbox (i.e., a ReagentRackTrack exists and InternalNo is within range), InternalNo is printed as "Reagent rack number" within the "Reagent information" table.**
EnzymRack**Id**	String	–	Reagent box: ID that was read from the enzyme rack bar code Buffer bottle and accessory trough: Empty

Differences in QIAsymphony AS Result File

Table 66 refers to changes in Table 21, "Description of QIAsymphony AS result file elements".

Table 66. Changes in QIAsymphony AS Result file elements

Element	Level	Description
NormalizationPlateTrack	**1**	**Provides information about the used normalization racks.**
NormalizationPointTrack	**2**	**Contains information about one position on the normalization plate.**
Dyes	**2**	**Provides information about possible dyes specified in the assay.**
DyeTrack	**3**	**Provides the dye name. Contains optionally the ABIInfo if the APS holding this dye targets ABI cyclers.**
ABIInfo	**4**	**Contains specific information for the ABI cycler software.**
StandardCurveTrack	**2**	**Provides information about the standard series created for this assay, if any.**
StandardCurvePointTrack	**3**	**Contains detailed information about each dilution concentration.**
Reagent**s**MapPair	2	Provides information about one component of the ready-to-use master mix.

Differences in BatchTrack

Table 67 refers to changes in Table 23, “Description of BatchTrack parameters”.

Table 67. Changes in QIAsymphony BatchTrack parameters

Parameter	Dimension	Range	Description
AllSamplesOK	Deleted: Bool **String**	(1, 0) [passed, failed, unclear]	Deleted: “1” indicates that all samples have the status “valid”. “0” indicates that at least one sample has the status “unclear” or “invalid”. **“Passed” if all samples in this result file are valid.** **“Failed” if at least one sample is invalid.** **“Unclear” if at least one sample is unclear and neither is invalid.**
NormalizationPlate Track (one or more)	**Object**	**–**	**The normalization racks used.**

Differences in OutputPlateTrack

Table 68 refers to changes in Table 28, “Description of OutputPlateTrack parameters”.

Table 68. Changes in QIAsymphony OutputPlateTrack parameters

Parameter	Dimension	Range	Description
IsHeterogenous	**Bool**	**[1, 0]**	**Type of rack (homogeneous or heterogeneous).**
Deleted: ProcessStepResult (zero or more)	Deleted: Object	–	Deleted: This field can be ignored. It may be removed in future software versions.

Differences in AssayPointTrack

Table 69 refers to changes in Table 29, “Description of AssayPointTrack parameters”.

Table 69. Changes in QIAsymphony AssayPointTrack elements

Parameter	Dimension	Range	Description
InputSlot	String	1, 2, 3, **6**	**The slot from which the template for this position was taken.** [The word “Sample” was deleted]. InputSlot = 6 when normalization rack is used.
SampleState	String	valid | unclear Deleted: | invalid | empty	Deleted: Indicates the status of the sample in the sample rack. If a rack file was used to define the sample racks, a sample may have the status “unclear” or “invalid”. Validity of the source sample. Normally, this is “valid”. However, if rack files are used to define the sample racks, this may be different. Invalid Samples are not assignable and therefore not processed. For standards/controls, this field does not apply and is set to the value “empty”.

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Parameter	Dimension	Range	Description
Concentration	Deleted: Double **String**	–	Deleted: The concentration of quantification standard. For quantification standards and positive assay controls, the concentration. In assays with normalization defined for all assay points, showing the eluate concentration, not the diluted or target concentration.
Concentration Formatted	**String**	**–**	**Concentration formatted for HTML result file.**
TemplateVolume	**Double**	**–**	**Volume of the eluate.** **Format: #.1 µl.**
DiluentVolume	**Double**	**–**	**Volume of the diluent.** **Format: #.1 µl.**
DiluentTransferred	**String**	**- | done | failed**	**Whether or not the diluent was transferred. If the assay does not involve diluent transfer, this element is empty.**
SampleTransfer Volume	**Double**	**–**	**Transferred sample volume during SP processing. Only set if assay point is ordered during integrated run.**

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Parameter	Dimension	Range	Description
BufferVolume	Double	–	Selected buffer volume (depends on selected elution volume) during QIAsymphony SP ordering. Only set if assay point is ordered during integrated run. **Note**: Buffer volume denotes the volume pipetted into the cartridges after the extraction process is complete. Part of the buffer volume is then pipetted to the eluate rack.

Differences in ReagentTrack

Table 70 refers to changes in Table 33, "Description of ReagentTrack parameters".

Table 70. Changes in QIAsymphony ReagentTrack parameters

Parameter	Dimension	Range	Description
Volume	Deleted: CVolume **Int**	–	Required volume of reagent (rounded up).
Deleted: AssayParameterSetName	Deleted: String	–	Deleted: The name of the Assay Parameter Set that requires this reagent.
Deleted: AssayDefinition	Deleted: String	–	Deleted: The name of the Assay Definition file used by the Assay Parameter Set.

Differences in ReagentAssayAssignment Track

The “ReagentAssayAssignmentTrack” element is new for software version 4.0. See Table 34, “Description of ReagentAssayAssignmentTrack parameters”.

Differences in NormalizationPlateTrack

The “NormalizationPlateTrack” element is new for software version 4.0. See Table 35, “Description of NormalizationPlateTrack parameters”

Differences in NormalizationPointTrack

The “NormalizationPointTrack” element is new for software version 4.0. See Table 36, “Description of NormalizationPointTrack parameters”.

Differences in AssayInfoTrack

Table 71 refers to changes in Table 38, “Description of AssayInfoTrack parameters”.

Table 71. Changes in QIAsymphony AssayInfoTrack parameters

Parameter	Dimension	Range	Description
AssayInfoId	**String**	**–**	**ID of the AssayInfo object.**
NormalizationDefinition Name	**String**	**–**	**Name of the normalization definition.**
NormalizationRackType	**String**	**–**	**Racktype for the normalization.**
TargetConcentration	**String**	**>0**	**Concentration for the result.**
TargetConcentration Formatted	**String**	**–**	**–**
MinimumTarget Concentration	**String**	**>= 0, <= Target Concentration**	**Minimum concentration for the result.**

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Parameter	Dimension	Range	Description
MinimumTarget Concentration Formatted	**String**	**–**	**–**
MaximumTarget Concentration	**String**	**> 0, >= Target Concentration**	**The maximum concentration for the result.**
MaximumTarget Concentration Formatted	**String**	**–**	**–**
UsesNormalization	**Bool**	**[1, 0]**	**"1" if normalization is applied, "0" otherwise (i.e., no normalization).**
Dyes	Deleted: String **Object (Class= "Dye TrackList")**	–	List of dyes specified in the Assay Definition file. This list may have been overwritten by the Assay Parameter Set.
StandardCurveTrack (optional)	Object	–	Information about the standard series created for this assay, if any. See "StandardCurve Track", page 91.

Differences in CurrentParameters

Table 72 refers to changes in Table 39, "Description of CurrentParameters parameters".

Table 72. Changes in QIAsymphony CurrentParameters parameters

Parameter	Dimension	Range	Description
PatternBasedPipetting	**Bool**	**[1, 0]**	**"1" if assay uses "User-defined output pattern"; "0" otherwise.**
StandardSeriesParameters	**Bool**	**[1, 0]**	**Specifies if assay definition contains parameters for standard series creation.**
CreateStandardSeries	**Bool**	**[1, 0]**	**Specifies if a standard series is created. Only valid if assay definition contains parameters for standard series creation.**

Differences in Dyes

The "Dyes" element is new for software version 4.0. See Table 40, "Description of Dyes parameters".

Differences in DyeTrack

The "DyeTrack" element is new for software version 4.0. See Table 41, "Description of DyeTrack parameters".

Differences in ABIInfo

The "ABIInfo" element is new for software version 4.0. See Table 42, "Description of ABIInfo parameters".

Differences in StandardCurveTrack

The “StandardCurveTrack” element is new for software version 4.0. See Table 43, “Description of StandardCurveTrack parameters”.

Differences in StandardCurvePointTrack

The “StandardCurvePointTrack” element is new for software version 4.0. See Table 44, “Description of StandardCurvePointTrack parameters”.

Differences in RackPosition

Table 73 refers to changes in Table 58, “Description of RackPosition parameters”.

Table 73. Changes in QIAsymphony RackPosition parameters

Parameter	Dimension	Range	Description
Concentration	**Double**	**>=0**	**Optional concentration value for eluate racks in ng/µl.**

Notes

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