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QIAsymphony® SP Protocol Sheet

VirusBlood200_V5_DSP protocol

This document is the VirusBlood200_V5_DSP *QIAsymphony SP Protocol Sheet*, R2, for QIAsymphony DSP DNA Mini Kit, version 1.

General information

The QIAsymphony DSP DNA Kit is intended for in vitro diagnostic use.

This protocol is for purification of viral DNA from fresh human whole blood using the QIAsymphony SP and the QIAsymphony DSP DNA Mini Kit. Viral DNA from released viruses as well as from cell-associated viruses is copurified with genomic DNA from blood cells.

Kit	QIAsymphony DSP DNA Mini Kit (cat. no. 937236)
Sample material	Human whole blood (EDTA or citrate anti-coagulated)
Protocol name	VirusBlood200_V5_DSP
Default Assay Control Set	ACS_VirusBlood200_V5_DSP_default IC
Editable	Elution volume: 60 µl, 85 µl, 110 µl, 165 µl
Required software version	Version 4.0 or higher

"Sample" drawer

Sample type	Human whole blood (EDTA or citrate anti-coagulated)
Sample volume	Depends on type of sample tube used; for more information see **www.qiagen.com/goto/dsphandbooks**.
Primary sample tubes	For more information see **www.qiagen.com/goto/dsphandbooks**.
Secondary sample tubes	For more information see **www.qiagen.com/goto/dsphandbooks**.
Inserts	Depends on type of sample tube used; for more information see **www.qiagen.com/goto/dsphandbooks**.
Other	Internal control–Buffer ATE mix required; use of internal control is optional

"Reagents and Consumables" drawer

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

n/a = not applicable.

"Waste" drawer

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

"Eluate" drawer

Elution rack (we recommend using slot 1, cooling position)	For more information see **www.qiagen.com/goto/dsphandbooks.**

Required plasticware

	One batch, 24 samples*	**Two batches, 48 samples***	**Three batches, 72 samples***	**Four batches, 96 samples***
Disposable filter-tips, 200 µl†‡	26	50	74	98
Disposable filter-tips, 1500 µl†‡	98	188	278	368
Sample prep cartridges§	21	42	63	84
8-Rod Covers¶	3	6	9	12

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

† There are 32 filter-tips/tip rack.

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

§ There are 28 sample prep cartridges/unit box.

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

Note: Numbers of filter-tips given may differ from the numbers displayed in the touchscreen depending on settings. We recommend loading the maximum possible number of tips.

Selected elution volume

Selected elution volume (µl)*	**Initial elution volume (µl)†**
60	90
85	115
110	140
165	195

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

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

Preparation of internal control–Buffer ATE mixture

Using the VirusBlood200_V5_DSP protocol in combination with amplification systems that use an internal control may require introduction of these internal controls into the purification procedure to monitor the efficiency of sample preparation and downstream assay.

The amount of internal control that is added depends on the assay system and the elution volume chosen within the VirusBlood200_V5_DSP protocol. Calculation and validation must be performed by the user. Refer to the manufacturer's instructions for the downstream assay to determine the optimal concentration of internal control.

Internal controls must be added with the internal control–Buffer ATE (ATE) mixture in a total volume of 60 µl. A mixture of internal controls can be used to analyze different parameters from a single eluate. Compatibility of different internal controls must be validated by the user. We recommend preparing fresh mixtures for each run just before use. If no internal control is used, the use of Buffer ATE is still required.

Selected elution volume (µl)	Initial elution volume (µl)	Volume internal control (µl)*	Volume Buffer ATE (ATE) (µl)	Final volume per sample (µl)
60	90	9	51	60
85	115	11.5	48.5	60
110	140	14	46	60
165	195	19.5	40.5	60

* The calculation of the amount of internal control is based on the initial elution volumes. Additional void volume depends on the type of sample tube used; see **www.qiagen.com/goto/dsphandbooks** for more information.
Note: The values displayed in the table are for preparation of internal control–Buffer ATE mixture for a downstream assay that requires 0.1 µl internal control/µl eluate.

Tubes containing internal control–Buffer ATE mixtures are placed in a tube carrier. The tube carrier containing the internal control–Buffer ATE mixture(s) must be placed in slot A of the "Sample" drawer.

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

Calculating the volume of internal control mixture

Tube type‡	Name on QIAsymphony touchscreen	Calculation of internal control mixture volume per tube
2 ml with cap; microtube 2 ml, PP, SKIRTED, (Sarstedt, cat. no. 72.694)	SAR#72.694 T2.0 ScrewSkirt	(n x 60 µl) + 360 µl*
Microtube 2 ml with cap; microtube 2 ml, PP, NON-SKIRTED, (Sarstedt, cat. no. 72.693)	SAR#72.693 T2.0 Screw	(n x 60 µl) + 360 µl*
Tube 14 ml, 17 x 100 mm polystyrene round-bottom (Becton Dickinson, cat. no. 352051)	BD#352051 FalconPP 17x100	(n x 60 µl) + 600 µl†

* Use this equation to calculate the required volume of internal control mixture (n = number of samples; 60 µl = volume of internal control–Buffer ATE mixture; 360 µl = void volume required per tube). For example, for 12 samples (n = 12): (12 x 60 µl) + 360 µl = 1080 µl. Do not fill the tube with more than 1.92 ml (i.e., a maximum of 26 samples per tube). If more than 26 samples will be processed, use additional tubes, ensuring that the void volume is added per tube.

† Use this equation to calculate the required volume of internal control–Buffer ATE mixture (n = number of samples; 60 µl = volume of internal control–Buffer ATE mixture; 600 µl = void volume required per tube). For example, for 96 samples (n = 96): (96 x 60 µl) + 600 µl = 6360 µl.

‡ See **www.qiagen.com/goto/dsphandbooks** for required inserts.

Preparation of sample material

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

Human whole blood

For isolation of viral DNA, we recommend using whole blood samples treated with EDTA or citrate. Samples should be processed within 24 hours of collection. Store or transport samples at 2–25°C. For longer storage, we recommend freezing aliquots at –20°C or –80°C.

Using fresh blood samples in primary tubes, mix the blood samples thoroughly (e.g., by inverting the tubes several times) before loading them onto the QIAsymphony SP. To ensure reliable sample transfer, avoid generating foam in sample tubes. Try to avoid blood clots in the samples and, if necessary, transfer the sample without clots to a fresh tube.

Revision history

Document revision history	
R2 12/2017	Update for QIAsymphony Software version 5.0

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

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