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QIASymphony[®] SP Protocol Sheet

SP2000_V2_DSP Protocol

This document is the SP2000_V2_DSP *QIASymphony SP Protocol Sheet*, R2, for QIASymphony DSP AXpH DNA Kit, version 1.

General information

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

This protocol was developed for use with post-gradient SurePath® specimen using the QIAasymphony SP and the QIAasymphony DSP AXpH DNA Kit.

Kit	QIAasymphony DSP AXpH DNA Kit (cat. no. 937156)
Sample material	Cervical specimens collected in SurePath preservative fluid
Protocol name	SP2000_V2_DSP
Default Assay Control Set	ACS_SP2000_V2_DSP
Sample volume*	2.5 ml required sample volume 2 ml processed sample volume
Eluate volume	Approximately 60 µl
Required software version	Version 4.0 or higher

* The QIAasymphony SP aspirates 2 ml of sample from the bottom of the sample tube. At least 2.5 ml sample input volume is required for the extraction of DNA for a "valid" flagged sample. Sample input volume less than 2.5 ml is possible but will result in "unclear" sample flagging. Sample input volume less than 1.5 ml will result in the sample not being processed and an "invalid" sample flagging.

"Sample" drawer

Sample type	Cervical specimens collected in SurePath Preservative Fluid
Sample volume	2.5 ml required sample volume 2 ml processed sample volume
Sample tube	14 ml, 17 x 100 mm polystyrene round-bottom (Becton Dickinson, cat. no. 352051 www.bd.com) For more information, see the labware list in the "Resources" tab at www.qiagen.com/goto/dspaxph .
Proteinase K tube	14 ml, 17 x 100 mm polystyrene round-bottom (Becton Dickinson, cat. no. 352051 www.bd.com) For more information, see the labware list in the "Resources" tab at www.qiagen.com/goto/dspaxph . For required proteinase K volumes see "Preparation of proteinase K," page 3.

"Reagents and Consumables" drawer

Position A1 and/or A2	Reagent cartridge (RC)
Position B1	TopElute Fluid bottle (TOPE)
Tip rack holder 1–17	Disposable filter-tips, 1500 µl
Unit box holder 1–4	Unit boxes containing sample prep cartridges
Unit box holder 1–4	Unit boxes containing 8-Rod Covers

“Waste” drawer

Unit box holder 1–4	Empty unit boxes
Waste bag holder	Waste bag
Liquid waste bottle holder	Empty liquid waste bottle
Tip chute holder	Tip chute
Tip park station	Empty tip park station

“Eluate” drawer

Elution rack (we recommend using slot 1, cooling position)	For more information, see the labware list in the “Resources” tab at www.qiagen.com/goto/dspaxph .
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Required plasticware

	One batch, 24 samples*	Two batches, 48 samples*	Three batches, 72 samples*	Four batches, 96 samples*
Disposable filter-tips, 1500 µl†	80	160	240	320
Sample prep cartridges‡	9	18	27	36
8-Rod Covers§	3	6	9	12

* 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.

Preparation of proteinase K

For use with protocols utilizing proteinase K: QIAGEN® Proteinase K (10 ml; cat. no. 19134)

No. of batches	No. of samples	Required amount of Proteinase K (ml)
1	24	2.9
2	48	5.2
3	72	7.5
4	96	9.8

Note: QIAGEN Proteinase K can be stored dry at room temperature (15–25°C until the expiration date. Do not use expired proteinase K.

The required amount of proteinase K must be transferred to a 14 ml 17 x 100 mm polystyrene, round-bottom tube (Becton Dickinson, cat. no. 352051) and placed into the first position of a tube carrier. The tube carrier containing the proteinase K must be placed in slot A of the “Sample” drawer.

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 material safety data sheets (MSDSs), available from the product supplier.

Cervical specimens in SurePath preservative fluid

This protocol was developed for use with post-gradient SurePath specimens.

Note: Post-gradient cervical specimens in SurePath Preservative Fluid can be stored up to 8 weeks at 5–25°C. Specimens should be equilibrated to room temperature (15–25°C) and transferred to sample tubes just before starting the run.

A post-gradient SurePath specimen of 800 µl, which was generated according to the manufacturer’s instructions, will be filled up to 2.8 ml with SurePath Medium. This 2.8 ml post-gradient SurePath specimen will be further diluted using 5.2 ml deionized water to a total volume of 8 ml. Mix the pretreated post-gradient SurePath specimens thoroughly, e.g., by vortexing or inverting the tubes, before transferring 2.5 ml of this sample material to a 14 ml 17 x 100 mm polystyrene, round-bottom tube (Becton Dickinson, cat. no. 352051). Place the sample into the tube carrier on the QIASymphony SP.

Note: To ensure reliable sample transfer to the sample prep cartridge, avoid generating foam in the sample material placed on the QIASymphony SP.

Note: Load external run controls into the first position of the first tube carrier.

The dilution of the 2.8 ml post-gradient SurePath specimen to 8 ml provides enough sample material to process a total of 3 replicates from one post-gradient SurePath specimen on the QIASymphony SP.

The QIAasymphony SP aspirates 2 ml of sample from the bottom of the sample tube. At least 2.5 ml sample input volume is required for the extraction of DNA for a “valid” flagged sample. Sample input volume less than 2.5 ml is possible but will result in “unclear” sample flagging. Sample input volume less than 1.5 ml will result in the sample not being processed and an “invalid” sample flagging.

Workflow of SP2000_V2_DSP protocol

0.8 ml post-gradient SurePath Preservative Fluid specimen



Add 2.0 ml SurePath media to obtain 2.8 ml post-gradient SurePath specimen



Add 5.2 ml DI water to obtain 8.0 ml processable post-gradient SurePath specimen



Load 2.5 ml processable post-gradient SurePath sample on the QIAasymphony SP

(5.5 ml processable post-gradient SurePath sample left over for further testing)

Note: 2.8 ml post-gradient SurePath samples diluted in 5.2 ml deionized water are stable for up to 4 weeks at 2–8°C.

We recommend using 2.5 ml sample input volume, which was also used for performance studies of the QIAasymphony DSP AXpH DNA system. The QIAasymphony SP aspirates 2 ml of an enriched cell fraction from the bottom of the tubes. This is due to the sedimentation of the cellular sample material.

Note: Visually check the residual sample volume in the sample tube placed on the QIAasymphony SP after transfer of the sample to the sample prep cartridge to ensure complete transfer of sample material.

During the preparation of post-gradient SurePath samples a centrifugal sedimentation step partially removes non-diagnostic debris and excess inflammatory cells from the sample (for more information refer to the PrepStain® System product insert; Becton Dickinson, doc. no. 779-07085-00 Rev. F). For other interfering substances such as douche, contraceptive jelly, feminine spray, anti-fungal cream, etc. the user must validate the impact on the downstream assay used.

Storage of eluates

At the end of each run, remove the microtiter plate containing the eluates directly from the cooling position of the “Eluate” drawer on the QIASymphony SP.

Note: We recommend storage of eluates in microtiter plates (Greiner, cat. no. 650161) at 2–8°C for up to 7 days.

Revision history

Document Revision History	
R2 12/2017	Update for QIASymphony Software version 5.0

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