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December 2017

# QIAasymphony<sup>®</sup> SP Protocol Sheet

## DNA Blood\_1000\_V7\_DSP protocol

This document is the DNA Blood\_1000\_V7\_DSP QIAasymphony SP Protocol Sheet, R2, for QIAasymphony DSP DNA Midi Kit, version 1.

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## General information

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

This protocol is for purification of total genomic and mitochondrial DNA from fresh or frozen human whole blood using the QIAasymphony SP and the QIAasymphony DSP DNA Midi Kit.

<b>Kit</b>	QIAasymphony DSP DNA Midi Kit (cat. no. 937255)
<b>Sample material</b>	Human whole blood (EDTA, citrate, or heparin anti-coagulated)
<b>Protocol name</b>	Blood_1000_V7_DSP
<b>Default Assay Control Set</b>	ACS_Blood_1000_V7_DSP
<b>Editable</b>	Elution volume: 200 µl, 400 µl, 500 µl
<b>Required software version</b>	Version 4.0 or higher

## “Sample” drawer

<b>Sample type</b>	Human whole blood (EDTA, citrate, or heparin anti-coagulated)
<b>Sample volume</b>	Depends on type of sample tube used; for more information see <a href="http://www.qiagen.com/goto/dsphandbooks">www.qiagen.com/goto/dsphandbooks</a> .
<b>Primary sample tubes</b>	For more information see <a href="http://www.qiagen.com/goto/dsphandbooks">www.qiagen.com/goto/dsphandbooks</a> .
<b>Secondary sample tubes</b>	For more information see <a href="http://www.qiagen.com/goto/dsphandbooks">www.qiagen.com/goto/dsphandbooks</a> .
<b>Inserts</b>	Depends on type of sample tube used; for more information see <a href="http://www.qiagen.com/goto/dsphandbooks">www.qiagen.com/goto/dsphandbooks</a> .

## “Reagents and Consumables” drawer

<b>Position A1 and/or A2</b>	Reagent cartridge
<b>Position B1</b>	n/a
<b>Tip rack holder 1–17</b>	Disposable filter-tips, 200 µl or 1500 µl
<b>Unit box holder 1–4</b>	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 <a href="http://www.qiagen.com/goto/dsphandbooks">www.qiagen.com/goto/dsphandbooks</a> .
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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, 200 µl†	4	4	8	8
Disposable filter-tips, 1500 µl†	114	220	334	440
Sample prep cartridges‡	18	36	54	72
8-Rod Covers†	3	6	9	12

\* 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.

## Elution volume

The elution volume is selected in the touchscreen. Depending on the sample type and DNA content, the final eluate volume may vary by up to 15 µl less than the selected volume. Due to the fact that the eluate volume may vary, we recommend checking the actual eluate volume when using an automated assay setup system that does not verify the eluate volume prior to transfer. Elution in lower volumes increases the final DNA concentration, but slightly reduces the yield. We recommend using an elution volume appropriate for the intended downstream application.

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## 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.

### Important point before starting

- QIAAsymphony magnetic particles may copurify RNA if it is present in the sample. In order to minimize RNA content in the sample, add RNase A to the sample before starting the procedure. The final RNase A concentration should be 2 mg/ml.

### Human whole blood

Whole blood samples treated with EDTA, citrate, or heparin can be used, and may be either fresh or frozen. If 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 QIAAsymphony SP. Frozen samples should be thawed quickly in a 37°C water bath with mild agitation to ensure thorough mixing and then equilibrated to room temperature (15–25°C) before beginning the procedure. 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.

Yield and quality of the purified DNA depend on the storage conditions of the blood. Fresher blood samples may yield better results. For short-term storage of up to 10 days, collect blood in tubes containing EDTA as an anticoagulant and store at 2–8°C. However, for applications requiring maximum fragment size, such as southern blotting, we recommend storage at 2–8°C for up to 3 days only, as low levels of DNA degradation will occur after this time. For long-term storage (over 10 days), collect blood in tubes containing a standard anticoagulant (preferably EDTA, if high-molecular-weight DNA is required), and store at –20°C or –70°C.

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## Revision history

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

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