



NEAT Liquid Biopsy Kit User Guide

Kit Contents and Equipment Lists

This document contains information on the number of extractions per kit, lists the kit’s components and the storage conditions for each, and specifies the necessary reagents, materials, and equipment for each kit and protocol. Please review the kit contents and storage conditions carefully and refer to this document to ensure that you have all the necessary materials for your intended procedure.

NEAT Liquid Biopsy Kit Contents

Number of Extractions Per Kit

NEAT Liquid Biopsy Kit SKU 77300	
Plasma Input Volume	# Extractions
1 mL	100
2 mL	50
4 mL	25

NEAT Liquid Biopsy Kit – Streck BCT SKU 77301	
Plasma Input Volume	# Extractions
4 mL	25

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Kit Content and Storage Conditions

NEAT Liquid Biopsy Kit, SKU 77300 Contents and Storage		
Kit Component	Amount	Storage Condition
Nanotrap® Liquid Biopsy Particles	25 mL	2°C to 8°C
Nanotrap® Lyse	50 mL	15°C to 30°C
Nanotrap® Wash	100 mL	15°C to 30°C
Nanotrap® Proteinase K	250 mg	2°C to 8°C *
Nanotrap® Elute	3.0 mL	15°C to 30°C
Nanotrap® Bind	4 x 0.8 mL	2°C to 8°C
Nanotrap® Transfer	50 mL	15°C to 30°C

NEAT Liquid Biopsy Kit – Streck BCT, SKU 77301 Contents and Storage		
Kit Component	Amount	Storage Condition
Nanotrap® Liquid Biopsy Particles	25 mL	2°C to 8°C
Nanotrap® Lyse	50 mL	15°C to 30°C
Nanotrap® Wash	100 mL	15°C to 30°C
Nanotrap® Proteinase K	250 mg	2°C to 8°C *
Nanotrap® Elute	3.0 mL	15°C to 30°C
Nanotrap® Bind	0.8 mL	2°C to 8°C
Nanotrap® Transfer	50 mL	15°C to 30°C
Nanotrap® Adapt	20 mL	15°C to 30°C

*Refer to protocol for storage conditions after resuspension.

Automated Protocols

Required Materials for Automated Protocol Using 1 mL of Plasma

Use the equipment and reagents listed in this section if you are using the following automated protocol:

- Automated cfDNA Isolation on KingFisher Apex/Flex System with 1 mL of Plasma Collected in a K2EDTA Blood Collection Tube or a PAXgene Blood ccfDNA Tube

REQUIRED EQUIPMENT, REAGENTS, AND MATERIALS (not included in the NEAT Liquid Biopsy Kit)		
Product	Company Name	SKU
All Protocols		
Ethanol (200 Proof)	N/A	N/A
Molecular Biology Grade Water, Sterile	N/A	N/A
Pipette tips	N/A	N/A
Plate seals or parafilm	N/A	N/A
Benchtop centrifuge (capable of 1,600 x g) for collecting plasma from whole blood	N/A	N/A
High-speed centrifuge (capable of 16,000 x g) for collecting plasma from whole blood	N/A	N/A
Single-channel pipette(s)	N/A	N/A
KingFisher Apex 1 mL Automated Protocol		
Requires One of the Following KingFisher Apex Purification Systems		
KingFisher™ Apex Purification System with 96 PCR Head	Thermo Fisher Scientific	5400910
KingFisher™ Apex Purification System with 96 Combi Head	Thermo Fisher Scientific	5400920
KingFisher™ Apex Purification System with 96 Deep-well Head	Thermo Fisher Scientific	5400930
Options for Appropriate 96 Deep-well Plates		
KingFisher™ 96 Deep-well Plate, Barcoded	Thermo Fisher Scientific	95040450B
KingFisher™ 96 Deep-well Plate, Sterile, Barcoded	Thermo Fisher Scientific	95040460B
Options for Appropriate 96 Deep-well Comb Tips		
KingFisher™ 96 Combi Tip Comb	Thermo Fisher Scientific	97002570
KingFisher™ 96-Tip Comb for Deep-well Magnet, Barcoded	Thermo Fisher Scientific	97002534B
KingFisher™ 96-Tip Comb, Barcoded	Thermo Fisher Scientific	97002524B
KingFisher™ 96 Deep-well Tip Comb and Plate, Sterile, Barcoded	Thermo Fisher Scientific	97002820B
Options for Appropriate 200 µL 96 Plates		
KingFisher™ 96 Plate (200 µL), Barcoded	Thermo Fisher Scientific	97002540B
KingFisher Flex 1 mL Automated Protocol		
Requires One of the Following KingFisher Flex Purification Systems		
KingFisher™ Flex Purification System with 96 PCR Head	Thermo Fisher Scientific	5400610
KingFisher™ Flex Purification System with 96 KingFisher Head	Thermo Fisher Scientific	5400620
KingFisher™ Flex Purification System with 96 Deep-well Head	Thermo Fisher Scientific	5400630
Options for Appropriate 96 Deep-well Plates		
KingFisher™ 96 Deep-well Plate, 50/Box	Thermo Fisher Scientific	95040450
KingFisher™ 96 Deep-well Plate, Sterile, 50/Box	Thermo Fisher Scientific	95040460
Options for Appropriate 96 Deep-well Comb Tips		
KingFisher™ 96-Tip Comb, 100/Box	Thermo Fisher Scientific	97002524
KingFisher™ 96-Tip Comb (for PCR Magnets), 50/Box	Thermo Fisher Scientific	97002514
KingFisher™ Deep-well 96-Tip Comb, 100/Box	Thermo Fisher Scientific	97002534
KingFisher™ Deep-well 96-Tip Comb and Plate, Sterile, 50 Pcs of Each	Thermo Fisher Scientific	97002820
Options for Appropriate 200 µL 96 Plates		
KingFisher™ 96 Microplate (200 µL), 50/Box	Thermo Fisher Scientific	97002540

Required Materials for All Automated Protocols Using 2 mL and 4 mL of Plasma

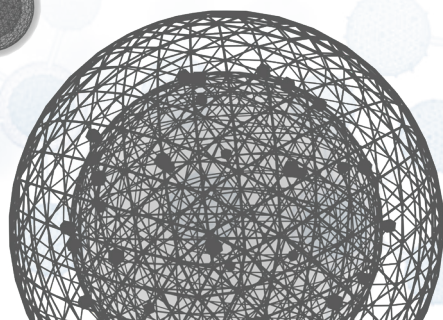
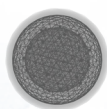
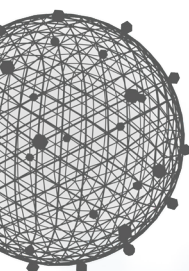
Use the equipment and reagents listed in this section if you are using the following automated protocols:

- Automated cfDNA Isolation on KingFisher Apex/Flex System with 2 mL of Plasma Collected in a K2EDTA Blood Collection Tube or a PAXgene Blood ccfDNA Tube
- Automated cfDNA Isolation on KingFisher Apex/Flex System with 4 mL of Plasma Collected in a K2EDTA Collection Tube or a PAXgene Blood ccfDNA Tube
- Automated cfDNA Isolation on KingFisher Apex/Flex System with 4 mL of Plasma Collected in a Streck Cell-Free DNA BCT

REQUIRED EQUIPMENT, REAGENTS, AND PROTOCOLS (not included in the NEAT Liquid Biopsy Kit)		
Product	Company Name	SKU
All Protocols		
Ethanol (200 Proof)	N/A	N/A
Molecular Biology Grade Water, Sterile	N/A	N/A
Pipette tips	N/A	N/A
Plate seals or parafilm	N/A	N/A
Benchtop centrifuge (capable of 1,600 x g) for collecting plasma from whole blood	N/A	N/A
High-speed centrifuge (capable of 16,000 x g) for collecting plasma from whole blood	N/A	N/A
Single-channel pipette(s)	N/A	N/A
KingFisher Apex 2 mL and 4 mL Automated Protocols		
Requires One of the Following KingFisher Apex Purification Systems		
KingFisher™ Apex Purification System with 96 PCR Head	Thermo Fisher Scientific	5400910
KingFisher™ Apex Purification System with 96 Combi Head	Thermo Fisher Scientific	5400920
KingFisher™ Apex Purification System with 96 Deep-well Head	Thermo Fisher Scientific	5400930
KingFisher™ Apex Purification System with 24 Combi Head	Thermo Fisher Scientific	5400940
Options for Appropriate 96 Deep-well Plates		
KingFisher™ 96 Deep-well Plate, Barcoded	Thermo Fisher Scientific	95040450B
KingFisher™ 96 Deep-well Plate, Sterile, Barcoded	Thermo Fisher Scientific	95040460B
Options for Appropriate 24 Deep-well Plates		
KingFisher™ 24 Deep-well Plate, Barcoded	Thermo Fisher Scientific	95040470B
KingFisher™ 24 Deep-well Plate, Sterile, Barcoded	Thermo Fisher Scientific	95040480B
Options for Appropriate 96 Deep-well Comb Tips		
KingFisher™ 96 Combi Tip Comb	Thermo Fisher Scientific	97002570
KingFisher™ 96-Tip Comb for Deep-well Magnet, Barcoded	Thermo Fisher Scientific	97002534B
KingFisher™ 96-Tip Comb, Barcoded	Thermo Fisher Scientific	97002524B
KingFisher™ 96 Deep-well Tip Comb and Plate, Sterile, Barcoded	Thermo Fisher Scientific	97002820B
Options for Appropriate 24 Deep-well Comb Tips		
KingFisher™ 24 Combi Tip Comb	Thermo Fisher Scientific	97002580
KingFisher™ 24 Deep-well Tip Comb and Plate, Barcoded	Thermo Fisher Scientific	97002610B
KingFisher™ 24 Deep-well Tip Comb and Plate, Sterile, Barcoded	Thermo Fisher Scientific	97002620B
Options for Appropriate 200 µL 96 Plates		
KingFisher™ 96 Plate (200 µL), Barcoded	Thermo Fisher Scientific	97002540B

REQUIRED EQUIPMENT, REAGENTS, AND MATERIALS (CONTINUED)
(not included in the NEAT Liquid Biopsy Kit)

Product	Company Name	SKU
KingFisher Flex 2 mL and 4 mL Automated Protocols		
Requires One of the Following KingFisher Flex Purification Systems		
KingFisher™ Flex Purification System with 96 PCR Head	Thermo Fisher Scientific	5400610
KingFisher™ Flex Purification System with 96 KingFisher Head	Thermo Fisher Scientific	5400620
KingFisher™ Flex Purification System with 24 Deep-well Head	Thermo Fisher Scientific	5400640
KingFisher™ Flex Purification System with 96 Deep-well Head	Thermo Fisher Scientific	5400630
Options for Appropriate 96 Deep-well Plates		
KingFisher™ 96 Deep-well Plate, 50/Box	Thermo Fisher Scientific	95040450
KingFisher™ 96 Deep-well Plate, Sterile, 50/Box	Thermo Fisher Scientific	95040460
Options for Appropriate 24 Deep-well Plates		
KingFisher™ 24 Deep-well Plate, 50/Box	Thermo Fisher Scientific	95040470
KingFisher™ 24 Deep-well Plate, Sterile, 50/Box	Thermo Fisher Scientific	95040480
Options for Appropriate 96 Deep-well Comb Tips		
KingFisher™ 96-Tip Comb, 100/Box	Thermo Fisher Scientific	97002524
KingFisher™ 96-Tip Comb (for PCR Magnets), 50/Box	Thermo Fisher Scientific	97002514
KingFisher™ Deep-well 96-Tip Comb, 100/Box	Thermo Fisher Scientific	97002534
KingFisher™ Deep-well 96-Tip Comb and Plate, Sterile, 50 Pcs of Each	Thermo Fisher Scientific	97002820
Options for Appropriate 24 Deep-well Comb Tips		
KingFisher™ Deep-well 24-Tip Comb and Plate, 50 Pcs of Each	Thermo Fisher Scientific	97002610
KingFisher™ Deep-well 24-Tip Comb and Plate, Sterile, 50 Pcs of Each	Thermo Fisher Scientific	97002620
Options for Appropriate 200 µL 96 Plates		
KingFisher™ 96 Microplate (200 µL), 50/Box	Thermo Fisher Scientific	97002540



Manual Protocols

Required Materials for All Manual Protocols

The reagents and equipment listed here are required for the following NEAT Liquid Biopsy Kit manual protocols:

- Manual cfDNA Isolation with 1 mL of Plasma Collected in a K2EDTA Blood Collection Tube or a PAXgene Blood ccfDNA Tube
- Manual cfDNA Isolation with 4 mL of Plasma Collected in a Streck Cell-Free DNA BCT

Required Reagents and Materials (not included in the NEAT Liquid Biopsy Kit)

All Protocols

- Ethanol (200 Proof)
- Molecular Biology Grade Water, Sterile
- Pipette tips

Manual Protocols

- 1.5 mL, 2 mL, and 15 mL centrifuge tubes – *Lo-bind tubes recommended.*
- PCR strip tubes (DNase/RNase Free) – *not needed, recommended.*

Required Equipment (not included in the NEAT Liquid Biopsy Kit)

All Protocols

- Benchtop centrifuge (capable of 1,600 x g) for collecting plasma from whole blood
- High-speed centrifuge (capable of 16,000 x g) for collecting plasma from whole blood
- Single-channel pipette(s)

Manual Protocols

- Magnetic racks for 2 mL (1 mL plasma input volume method) and 15 mL (4 mL plasma input volume method) tube sizes — Thermo Fisher Scientific DynaMag™ racks recommended
- Laboratory thermal mixer — Eppendorf ThermoMixer® or Benchmark MultiTherm™ Shaker Touch recommended
- Centrifuge for 2 mL (1 mL plasma input volume method) and 15 mL (4 mL plasma input volume method) centrifuge tubes
- Vortex
- Vortex with 2 mL tube-compatible attachment
- Tube rotator — Benchmark Roto-Mini™ Plus recommended

Contact Us

Phone: +1.800.615.0418x1

Web: www.ceresnano.com

Email: info@ceresnano.com