DeepChek® NGS Clean-up beads

User Guide

Version 2 – Revision 0

For Research Use Only (RUO). Not for use in diagnostic procedures. No claim or representation is intended to provide information for the diagnosis, prevention, or treatment of disease.

REF	**N411-03**	**GTIN: 05407007961238**
	N411-04	**GTIN: 05407007961245**

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Document control

Date	Device version	IFU version	Description of change
2024/07/08	NA	V2.0	Update of document due to supplier change (cf. 20240524_Change notification_N411-0X_Signed.pdf")
2023/06/22	NA	V1.1	Modification in section "Contact information"
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Contents

Introduction

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The ***DeepChek® NGS Clean-up beads*** are designed to optimize PCR clean-up by removing small fragments such as dNTPs, salts, primers and primer-dimers. It is a magnetic bead-based formulation that comes ready to use.

The technology behind the magnetic beads allows for consistent binding capacity and highly reproducible results. The PCR clean-up protocol is optimized for a higher yield of DNA fragments > 90 bp. The ***DeepChek® NGS Clean-up beads*** also allow for flexibility of starting sample volumes with the ability to scale.

In addition, the ***DeepChek® NGS Clean-up beads*** are also sustainable and eco-friendly. They can be shipped and stored at room temperature reducing the need for refrigeration and cutting down on lab time.

Application

Special for DNA or RNA library preparation for NGS.

Assay components

*The **DeepChek® NGS Clean-up beads*** are provided in two formats.

*Table 1: Volumes and storage conditions of the **DeepChek® NGS Clean-up beads (RUO)***

Label	Volume	Color cap	Storage
N411-03	50 mL	White	Room temperature (15°C to 25 °C)
N411-04	5 mL	White	Room temperature (15°C to 25 °C)

Reagent storage and handling

The ***DeepChek® NGS Clean-up beads*** can be shipped at +2°C/+8°C or at room temperature. Once received, the product should be stored at room temperature.

Expiration date: please refer to the label on the bottle.

Products from different lot numbers should not be mixed.

Materials required but not provided

- Adhesive plate seals or foils
- Adjustable micropipettors
- Multichannel micropipettors
- Reagent reservoirs
- Optical 96-well reaction plate
- Magnetic stand-96
- 1X TE buffer (low EDTA)
- Ethanol, 200 proof
- Nuclease-free water

Note: Ensure that instruments have been checked and calibrated according to the manufacturer's recommendations and to the relevant manufacturer's Instructions for Use (IFU) to proceed with the instrument.

Warnings and precautions

- **For Research Use Only (RUO). Not for use in diagnostic procedures.** No claim or representation is intended to provide information for the diagnosis, prevention, or treatment of disease.
- Store assay reagents as indicated on their individual labels.
- Do not mix reagents from different kit lots.
- Reagents must be stored and handled as specified in these instructions for use. Do not use reagents past the expiration date.
- Work surfaces and pipettes should be cleaned and decontaminated with cleaning products such as 10% bleach, "DNAZap™" or "RNase AWAY®" to minimize risk of nucleic acid contamination. Residual bleach should be removed from the surface by wiping with 70% ethanol.
- Use personal protective equipment (PPE) consistent with current guidelines for the handling of potentially infectious specimens.
- Do not eat, drink, smoke, apply cosmetics or handle contact lenses in areas where reagents and human specimens are handled.
- Always use pipette tips with aerosol barriers. Tips must be sterile and free from DNases and RNases.
- Dispose of waste in compliance with applicable regulations.
- Frequent cleaning of the wells of the PCR instrument thermos-blocks is recommended to prevent contamination.
- To avoid contamination, use separated and segregated working areas for extraction and PCR/sequencing preparation, respectively.
- Check whether the PCR reaction tubes / plates are tightly closed / sealed before loading on the PCR instrument to prevent contamination of the instrument from leaking tubes.

Workflow

Starting

- Identify the product.
- Verify the expiration date.
- Verify the latest instruction for use available for the product lot number.
- Verify if the product was used already. If yes, check the remaining tests available.

Before starting

- Shake the ***DeepChek® NGS Clean-up beads*** bottle or vortex on a mini vortex to have a well-mixed bead slurry.

Note: ensure there are no beads settling at the bottom of the container.

- Preparing fresh 80% ethanol before beginning the clean-up protocol is critical for optimal results.

Note: for example, add 8 mL of 100% ethanol to 2 mL of nuclease-free water to prepare approximately 10 mL of 80% ethanol.

- Mix the beads well before aliquoting. Because beads slurry is viscous, use pipette tip priming with slow aspiration and dispensing of beads.
- For PCR cleanup, beads are added at X 1.8 volume of PCR sample input volume, used in purification.

Purification protocol

1. Centrifuge the plate with the PCR products for 30 sec at 900 x g.
2. Carefully transfer 20 µL PCR (or Nested PCR) product from the PCR plate to each well of the purification plate (keep the layout the same for the two plates and be careful not to accidentally rotate either plate).
3. Mix the bottle of ***DeepChek® NGS Clean-up beads*** for 20 seconds, or until the bottle is completely resuspended and then add 36 µL of the beads into each well of the PCR product. Mix thoroughly by pipetting up and down at least 12 times until the ***DeepChek® NGS Clean-up beads*** / PCR mixture is completely homogeneous.
4. Incubate the plate 5 minutes at room temperature.
5. Place the plate on the 96-well magnetic stand and incubate for 3-5 min at room temperature until the supernatant is clear.
6. With the plate still on the magnetic stand, carefully remove and discard the supernatant without disturbing the beads.
7. With the plate on the magnetic stand, add 200 µL of freshly prepared 80% ethanol to each well. Do not mix. Incubate at room temperature for 30 seconds.
8. Carefully remove the supernatant without disturbing the beads.
9. Repeat steps 7 and step 8 once.
10. Dry the beads at room temperature for 3-5 min, or until complete evaporation of EtOH. DO NOT OVER-DRY THE BEADS.
11. Remove the plate from the magnetic stand then resuspend the beads in 40 µL of 1X TE or molecular grade water. Incubate at room temperature for 2 minutes for the elution.
12. Place the plate back to the magnetic stand and incubate for 2 min or until liquid becomes clear.
13. Using a multichannel pipette, transfer the supernatant (approx. 35 µL) from each well into a fresh 96-well PCR plate.
14. Cover the plate with a fresh plate seal and store at 4°C (if to use within 24 hours) or -20°C until ready to proceed to quantification by Fluorometry using a Quant-iT PicoGreen dsDNA or a Qubit Assay Kit.

Product quality control

In accordance with ABL's Quality Management System, each lot of the assay is tested against predetermined specifications to ensure consistent product quality. Certificates of Analysis are available upon request.

Symbols

REF	Catalog number	LOT	Product lot number
	Use by		Temperature limitation
	Manufacturer	**R*n***	R is for revision of the Instructions for Use (IFU) and n is the revision number

Contact Information

For technical assistance and more information, please see our Technical Support Center at Online: support-diag.ablsa.com; Email: support-diag@ablsa.com; Call +339 7017 0300 Or contact your ABL Field-Application Specialist or your local distributor. For up-to-date licensing information or product-specific disclaimers, see the respective ABL Assay User Guide. ABL User Guides are available at **www.ablsa.com/ifu** or can be requested from ABL Technical Services or your local distributor.

Manufacturer and distributors

Lithuania

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