Lysis Buffer A

DB-1281

General description

Lysis Buffer A is designed for fast and easy extraction of genomic DNA (gDNA) from a wide variety of cell types, e.g. human cells, bacteria (both gram-negative and gram-positive), yeast cells and DNA viruses (both non-enveloped and enveloped). One-step lysis, which can be performed in either a PCR cycler or a heating block, is used for efficient nucleic acid extraction. The lysate obtained can be added directly to the PCR reaction. No further purification step is needed after the lysis.

Please use the chart "PCR Mixes" at https://www.dianabiotech.com/enzymes/ for selection of the optimal PCR mix for your application. You will find information about our PCR mixes optimized for various applications, including mixes suitable for multiplex probe-based qPCR, mixes with SYBR™ Green I dye or mixes for direct loading of the PCR product on a gel. For more information on the use of Lysis Buffer A with our PCR mixes, please refer to the application notes on the product website, which will be updated on a regular basis.

Applications and Features

The use of Lysis Buffer A is designed for research studies and recommended for easy extraction of gDNA from various cell types, which can be subsequently amplified in PCR.

- Extraction of gDNA from human cells, bacteria, yeast cells, DNA viruses etc.
- Ideal for target detection from samples with low numbers of cells that are difficult to lyse.
- Easy handling with the one-step and one-tube protocol, finished up to 20 minutes.
- Cost-effective DNA extraction without the need for spin columns.
- No purification or post-lysis handling is required.
- Ideal for routine and high-throughput DNA extraction.

Kit Components

Kit component	REF code	Volume (ml)	Storage temperature	Cap colour + label
Lysis Buffer A	RF05620	5	2 °C - 8 °C	LB A

A possible precipitate is not an indication of a defective product. Warm up to ambient temperature and mix the buffer thoroughly to dissolve the precipitate before use.

Quality Control

For each lot, the appearance of the solution is checked.

Storage

Keep the component at 2 °C - 8 °C for long-term storage. Lysis Buffer A can be stored at laboratory temperature (up to 25 °C) for 2weeks.

Shelf life: 18 months

Shipment: ambient temperature (transport within 2 weeks at ambient temperature does not affect product quality)

Protocol

For PCR applications, the recommended number of cells to be lysed in one tube is 10^3-10^5, but it is possible to use a lower number of cells (even down to single cell). Lysis efficiency is cell type dependent, and the user must validate its use in his/her application.

- Pellet the cells (depending on the cell type – e.g. 5 minutes at up to 600 g for mammalian cells, 5 minutes at 2000 g for bacteria) and remove the supernatant (medium). Alternatively, mix the cell suspension with Lysis Buffer A up to 1:4.
- Add 20-50 µL of Lysis Buffer A per sample (tube), resuspend the cells by vortexing and gently spin to collect the cells and liquid at the bottom of the tube. Alternatively, you can resuspend the cells by pipetting the solution up and down several times.
- Heat the mixture to 95 °C for 20 minutes in the PCR cycler or in the heating block. Duration of 20 minutes is the best for most cell types, but shorter time may be sufficient for some cell types.
- Centrifuge the tube at 2000g for 2 minutes to remove cell debris.
- Add the supernatant directly to the PCR reaction, up to 5 µL can be added to the 20 µL reaction.

Extract from some specific cell types may inhibit the PCR reaction. It is recommended to use a lower number of cells in this case or to dilute the lysate before adding it to the PCR reaction. Prepare a dilution series of the cells to determine if this is the case in your application.

Products

Catalogue No	Size
DB-1281-5ml	5 ml

Disclaimer

For research use only.

It is the user´s responsibility to validate the specific use of the kit.

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