

MagSi-DNA clean kit

Product Description

Product nr: MD60013, MD60014

The MagSi-DNA clean Kit comes in two versions:

MagSi-DNA clean 150 (150 DNA purifications) Art. No.: MD60013

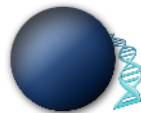
MagSi-DNA clean 15000 (15.000 DNA purifications): Art. No.: MD60014

Kits contents

Content	150 purifications	15.000 purifications
Dye Removal Reagent (M-DRR) MD70080	Reconstitute in 150 µl glycerol 50%	Reconstitute in 15 ml glycerol 50%
MagSi-DNA clean MD07019	600 µl magnetic particle mix	60 ml magnetic particle mix
Manual	1	1

General information

The **MagSi-DNA clean kit** provides a convenient tool for ultrafast and efficient direct purification of PCR products from 80 bp up to 30 kb from amplification reactions. The DNA fragments will be bound directly onto the surface of the magnetic beads. Finally, the DNA fragments will be eluted with low salt buffer or ddH₂O. The technology for binding of DNA fragments onto the applied magnetic nanoparticle surface do not require use of any hazardous chaotropic buffers. The isolation protocol as



well as all buffers are optimized to provide high yield and purity of the recovered DNA fragment. The "hands-on time" necessary for the whole procedure is reduced to a minimum.

The MagSi-DNA clean is designed for use in high-throughput mode in 96 and 384-wells MTP plate format but is also very well suited for use in manual PCR tube format. The Kit is designed to address two applications:

- Purification and concentration of DNA Fragments**, especially crude PCR mixes to be cleaned up for DNA cycle sequencing reaction (protocol 1)
- Clean-up after cycle sequencing reaction** prior to read out in DNA sequencers (protocol 2)

Thereby the two protocols act as independent modules which can be combined individually by the user on any working platform. For example, the PCR clean-up (protocol 1) can be performed in 96-well 20 µl PCR volume format and the later sequencing clean-up can be performed in 10 µl sample volume 384 format. Many further combinations are also possible as shown below:

Purified DNA fragments (protocol 1) are ready to use in various downstream application such as:

- Digestion with restriction enzymes
- Hybridization
- Labelling
- Cloning
- Sequencing
- In vitro Transcription

Kit usage

This product is stable for at least 1 year after production date when stored at 2-8°C.

When working with chemicals, always wear a suitable lab coat, disposable gloves and protective goggles. For more information, please consult the appropriate material safety data sheets (MSDS). These are available online in convenient and compact PDF format at

www.magnamedics.com under each MagnaMedics kit and kit component.

Reagents and equipment to be supplied by user:

- Thermoblock (for heating up to 45-50°C)
- Disposable gloves
- Pipettes and pipette tips
- Vortex
- Reaction tubes (1.5 ml or 2.0 ml)
- ddH₂O
- Isopropanol (p.a.)
- Ethanol (p.a.)
- either 384 well PCR-well plate, 96 well PCR-well plate or PCR tubes.

General Protocols

Protocol 1: Clean up of crude DNA fragments (PCR mixes)

Purification and concentration of DNA fragments from enzymatic reactions, like PCR-products from PCR reactions, cDNA synthesis, enzyme restriction digestions

Protocol for sample volume up to 10 µl (384-well PCR plate format).

- Binding of the PCR-fragments: To 10 µl PCR mix add first 26 µl alcohol mix* (see Kit Contents) and secondly add 4 µl MagSi-DNA clean particle mix;** mix well by pipetting up and down 10 times.
- Incubate for 3 minutes at room temperature.**
- Place the 384-wells PCR plate on a magnetic separator for 2 minutes** to collect the magnetic beads completely. **Discard the supernatant.** Make sure you do not remove any of the magnetic beads.

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- 4. Washing of the magnetic beads: add 40 µl pure isopropanol** (p.a.) and resuspend the magnetic beads by pipetting up and down 10 times. **Incubate for 1 minute** at room temperature (RT) and place the 384-wells PCR plate on a **magnetic separator for 2 minutes** to collect the magnetic beads completely. **Discard the supernatant.**
- 5. Elution of the PCR fragments: Add 15-25 µl Elution Buffer** to the magnetic bead sample and mix by pipetting up and down 10 times. Incubate for 2 minutes at room temperature.
- 6. Place the 384-wells PCR plate on a magnetic separator for 2 minutes to collect the magnetic beads completely. Transfer the supernatant to a clean container to perform the sequencing reaction.** Try to avoid pipetting magnetic particles as the liquid contains purified sample free of contaminants.

Protocol 2: clean up after cycle sequencing reaction

Removal of DyeDeoxy™ terminators from DNA cycle sequencing reactions of PCR-products and Plasmids after use ABI Prism™ terminator Kits (384 MTP format).

Protocol for sample volume up to 10 µl (384-well PCR plate format).

- 1. Dye blob reduction: To reduce any dye blobs in the DNA sequencing read out perform an upfront dye blob reduction step (step 1-2) prior to the DyeDeoxy removal itself.** Depending on the final specifications in terms of DNA sequencing, read-out length and sequencing quality this step might be prolonged or additional dye removal reagent (M-DRR) might be added.
- 2. To 10 µl sequencing reaction, add 1 µl M-DRR.** Mix well.
- 3. Incubate the mixture 5-10 minutes at room temperature.** For high performance DNA sequencing results, the incubation time

can be prolonged to 15-30 min. In addition, the incubation time has to be adapted to the individual liquid handling setup.

- 4. Binding of the DNA fragments: First add 25,5 µl alcohol mix* (see Kit Contents) and secondly add 4 µl MagSi-DNA clean particle mix;** mix well by pipetting up and down 10 times.
- 5. Incubate for 3 minutes at room temperature.**
- 6. Place the samples on a magnetic separator for 2 minutes** to collect the magnetic beads completely. **Discard the supernatant.** Make sure you do not remove any of the magnetic beads.
- 7. Washing of the magnetic beads: add 40 µl pure isopropanol (p.a.)** and resuspend the magnetic beads by pipetting up and down 10 times. **Incubate for 1 minute at room temperature (RT) and place the samples on a magnetic separator for 2 minutes** to collect the magnetic beads completely. **Discard the supernatant.**
- 8. Elution of the DNA fragments: Add 15-25 µl Elution Buffer** to the magnetic bead sample. Mix by pipetting up and down 5 times. Incubate for 2 minutes at room temperature.
- 9. Place the samples on a magnetic separator for 2 minutes** to collect the magnetic beads completely. **Transfer the supernatant to a clean container.** Try to avoid pipetting magnetic particles as the liquid contains purified sample free of contaminants.

Please note: For detailed information please read the manual for this kit as part of the kit carefully. The manual contains further protocols for use of this Kit in 96 well format as well as for use with PCR tubes. Furthermore the manual contains important information for; a) quality control and warranty; b) downstream applications; c) safety information and d) storage conditions.

Important: Please aliquot the dye removal reagent (M-DRR) directly after delivery of the Kit. Store the aliquots at -20°C.

Preparation time is approx. 20 – 35 minutes.

Additional Information

Internet

www.magnamedics.com

Disclaimer

For R&D use only. Not for drug, household or other uses. Material Safety Data Sheet (MSDS) is available on our website at www.magnamedics.com.

Order Information

Product number	Product description
MD60013	MagSi-DNA clean Kit for 150 isolations
MD60014	MagSi-DNA clean Kit for 15000 isolations

Larger quantities or individual configuration of the Kit on request

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