DATA SHEET

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1. Identification

Product name	**HigherPurity™PCR Clean-Up Magnetic Beads**
Cat. No	**AN360**

2. Description

The HigherPurity™ PCR Clean-Up Magnetic Beads utilizes solid-phase reversible immobilization paramagnetic bead technology for PCR clean-up and size selection. The magnetic beads selectively bind DNA fragments based on the volume ratio of bead suspension and sample, allowing for high recovery of DNA using a quick and simple procedure. Excess salts, enzymes, primers and nucleotides can be removed through a simple washing procedure.
With this paramagnetic bead format, you can easily perform manual or fully automated, high-throughput PCR clean-up without any centrifugation or filtration steps.

3. Composition

Cat. No	Quantity
AN360	5 ml

4. Features

- Does not require centrifugation/filtration steps
- Removes excess primers, primer-dimers, dNTPs, and salts
- It can also be used for DNA size selection based on the ratio of beads to DNA sample.
- **HigherPurity™ PCR Clean-Up Magnetic Beads** can be easily used in manual and automated 96- or 384- well formats.

5. Storage specifications

- Store protected from light at 4°C upon arrival.
- Freezing may reduce binding efficiency of beads.
- Beads appear brown and may settle during storage. Shake the reagent well to a homogenous appearance before use.

6. Applications

- PCR
- Sequencing
- Fragment Analysis
- Genotyping
- Cloning

7. Further information

Product Use Limitations

This product is developed, designed, and sold exclusively only for research purposes use. The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.

Safety Information

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.canvaxbio.com where you can find, view, and print the MSDS for each CANVAX kit.

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8. PROCEDURE

This is a standard protocol for PCR clean-up using a bead:DNA ratio of 1.8X for DNA fragments or PCR amplicons that are 100 bps or larger in size. Note the most common ratio used for PCR clean-up is 1.8x. By altering the volume ratios, DNA fragment with other size ranges can be obtained.

1. Shake bottle with magnetic beads to fully resuspend and add accordingly to the sample reaction shown below

96-well format	
Sample Reaction Volume(µl)	**Beads Volume (µl)**
10	18
20	36
50	90
100	180

384-well format	
Sample Reaction Volume(µl)	**Beads Volume (µl)**
5	9
7	12.6
10	18
14	25

For microcentrifuge tube apply Bead:DNA ratio of 1.8X.
(Volume of magnetic beads per reaction) = 1.8 x (Reaction Volume)

2. Pipette the entire volume 10 times to mix thoroughly to a homogenous appearance and incubate for 5 minutes at room temperature for optimal binding.
3. Place the reaction plate (or microfuge tube) onto a Magnetic Separation Rack for 5 minutes to separate the bead particles from the solution or until the solution becomes clear.
   💡 *Wait for the solution to clear before proceeding to the next step.*
4. Aspirate the cleared solution while the reaction plate is on the Magnetic Separation Rack. Avoid disturbing the beads.
5. Dispense 200 µL of freshly prepared 70% ethanol to each well of the reaction plate for the 96 well plate format; or 30 µL of freshly prepared 70% ethanol to each well of the reaction plate for the 384 well plate format.
   Incubate for 30 seconds at room temperature and fully remove the ethanol. Repeat for a total of 2 washes.
6. Place the reaction plate on bench top to air-dry. Be sure to allow the plate to dry completely.
   💡 *Dry time is optional to ensure all trace of ethanol is removed. If the beads are not dried enough, residual ethanol may affect downstream reactions. Elution efficiency will significantly decrease if the beads are over dried.*
7. Remove the reaction plate (or tube) from the Magnetic Separation Rack and add 15-50 µL of the elution buffer (water, TRIS or TE) to each well (or tube). Pipette mix 10 times to resuspend the beads and incubate at room temperature for 2-5 minutes.
8. Place the reaction plate (or tube) onto the Magnetic Separation Rack to separate the beads from the mix solution. Transfer the eluate to a new plate (or tube).
9. The purified DNA is ready for downstream applications or storage at -20˚C.