For life science research only.
Not for use in diagnostic procedures.

www.behgene.com

BehMag Gel Clean Up Kit

Small-Scale Preparations of DNA Isolation based on Magnetic beads

Components

	25 preps	50 preps
MB Buffer	9ml	18ml
Magnetic Beads	1.5.ml	3 ml
WB Buffer	15ml	30ml
EB Buffer	5ml	10ml

Stored at room temperature

Expiration: 1 year

Companion Device----------

Magnetic separation rack

Equipment & Reagents to be supplied by user----------

- Pipets and pipet tips
- Isopropanol (96-100%)
- 1.5 ml Microtube
- Vortex
- Dry Heat Block/ Water Bath

Precautions and Disclaimers----------

- This kit has been designed for research purposes only. It is not intended for human or diagnostic use.
- Avoid freeze/thaw cycles and centrifugation which could damage the beads.
- Be sure to vortex well magnetic beads before using
- Vortex buffers 10 seconds before adding

Description ----------

Designation is here made of BehMag Gel Extraction kit in order to quickly purify DNA from agarose gel, using gel electrophoresis method. This kit takes advantage of uniquely coated superparamagnetic nanoparticles that allow for robust binding with DNA fragments.

Process of extracting: Simply by adding Gel Solubilization Solution the agarose gel starts to be broken down, and the extraction is immediately conducted via magnetic beads. The Kit has the capacity of efficient purification of DNA ranging from 70bp

to 20kb and, the recovery efficiency is maximally 95%. The obtained DNA samples can be directly employed to applications such as microinjection, restriction digestion, PCR, ligation and transformation, hybridization, in vitro transcription, labeling, etc.

Specifications----------

- High-speed: fast purification of DNA fragments from agarose gel (30 min)
- High yield: 30µl of magnetic beads can bind 10µg DNA
- High recovery: recovery of DNA fragments is up to 95%
- High quality: purify DNA fragments have high quality and show reliable performance in PCR, qPCR, sequencing, cloning, and labeling, etc.
- Automation: no liquid-liquid mixing and separation process; therefore, the whole procedure can be easily automated

Protocol ----------

1. Cut the target gel containing the DNA fragment of interest with a sterile blade and transfer to a clean microtube.

2. Weigh the gel slice and add 2× of MB buffer (e.g. add 200µl of MB Buffer to100mg of gel slice).

3. Incubate the tube containing the gel slice and MB buffer in a water bath at 55°C for 5 min, until the gel is completely dissolved. Shake during incubation to accelerate the solubilization process.

4. Add 30µl magnetic beads to the tube and mix well. Incubate at 55°C for 10 minutes. During incubation, shake the tube every 3 minutes. Make sure the beads get completely resuspended by vortexing and the repeating step for 2 time.

5. Add isopropanol (50µl isopropanol per 100mg of gel is recommended), invert the tube for 1-2min to mix.

6. Adsorb beads using a magnetic separator rack, discard the supernatant.

7. Add 300µl WB Buffer, vortex the tube for 30sec, place the microtube in the magnetic rack and discard the supernatant.

8. Add 300µl WB Buffer, vortex the tube for 10 sec and then spin the tube for 5 sec.

Place the microtube in the magnetic rack and discard the supernatant.

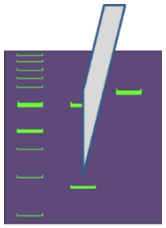
9. Incubate the open tube at 40 °C for 5 minutes to evaporate the residual ethanol completely. Do not over-dry the beads.

10. Add 30µl EB buffer and mix well.

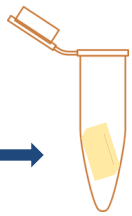
Incubate at 55°C for 15 min and then spin it for 10 sec

11. Place the microtube in the magnetic rack and transfer supernatant containing DNA to a clean microtube for DNA testing or other subsequent experiments.

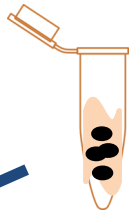
Flow Chart



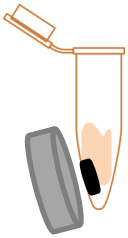
Cutting the target gel



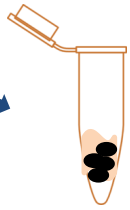
Adding MB buffer and incubating the tube



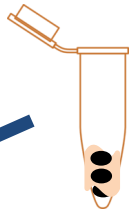
Adding Magnetic Beads



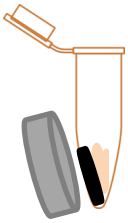
Adsorbing beads and
discarding the supernatant.



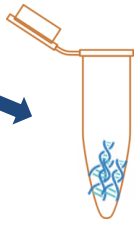
Adding WB buffer



Adding EB buffer



Applying magnetic field



Transferring supernatant into a fresh tube