



Magnetic DNA Gel Extraction Kit

Catalog No. MBDP-05001, MBDP-05002

【Introduction】

Magnetic DNA Gel Extraction Kit is used to purify DNA fragments from agarose gel following gel electrophoresis.

The kit contains superparamagnetic nanoparticles, which are coated through a unique process, enabling strong binding with DNA fragments with little to no non-specific binding.

Extraction process is simple and fast: add Gel Solubilization Solution to dissolve agarose gel, and DNA fragments are then extracted by magnetic beads. The kit is suitable for the purification of 50bp-20kb DNA. DNA recovery is usually up to 95%. Purified DNA are ready for direct use in all applications, including sequencing, ligation and transformation, restriction digestion, labeling, microinjection, PCR, *in vitro* transcription, hybridization and other subsequent experiments.

【Product Features】

- **High-speed:** fast purification of DNA fragments from agarose gel
- **High yield:** 25 μ l of magnetic beads can bind 10 μ g 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, restriction enzyme digestion, cloning, and labeling, etc.
- **Automation:** no liquid-liquid mixing and separation process; therefore, the whole procedure can be easily automated



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【Components】

<i>Catalog No.</i>	<i>MBDP-05001</i> <i>(50 samples)</i>	<i>MBDP-05002</i> <i>(500 samples)</i>
Gel Solubilization Solution	40ml	200ml x 2
Magnetic Beads	1.5ml	15ml
Washing Solution I	30ml	150ml x 2
Washing Solution II	--- ^a	--- ^a
Elution Solution	15ml	50ml

Prepared by user: isopropanol and Washing Solution II (^a: 75% ethanol in water)

【Storage and Expiration】

Stored at room temperature; Expiration: 1 year.

【Companion Device】

Magnetic separation rack or automated magnetic particle processors, a water bath (60°C)

【Manufacturer】

Avanbio, ABD-05001, ABD-05002



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【Experiment Procedure】

1. Excise the target gel containing the DNA fragment of interest.
2. Weigh the gel slice in a tube and add 3× of Gel Solubilization Solution (e.g. add 300µl of Gel Solubilization Solution to 100mg of gel slice).
3. Incubate the tube containing the gel slice and Gel Solubilization Solution in a water bath at 60°C for 5-15min, until the gel is completely dissolved. Invert the tube 3-4 times during incubation to accelerate the solubilization process.
4. Remove the tube from the water bath after the gel is dissolved, add 25µl magnetic beads to the tube and mix well.
5. Add isopropanol (200µl isopropanol per 100mg of gel is recommended), invert the tube for 1-2min to mix.
6. Adsorb beads using a magnetic separator, discard the supernatant.
7. Add 500µl Washing Solution I to wash beads, invert the tube for 30sec to mix, transfer the solution containing beads to a clean centrifuge tube, adsorb beads and discard the supernatant.
8. Add 500µl Washing Solution II, mix with beads for 30sec, adsorb beads and discard the supernatant.
9. Add 500µl Washing Solution II, mix with beads for 30sec, and transfer the liquid containing the beads to a clean centrifuge tube. Adsorb beads and discard the supernatant. Let beads stand for 3-6min to remove residual ethanol.
10. Add 30µl Elution Solution (TE buffer or ddH₂O), and mix with beads for 2min to release DNA from beads.
11. Adsorb beads and transfer supernatant containing DNA to a clean centrifuge tube for DNA testing or other subsequent experiments.

【Additional Information】

1. The Solubilization Solution may precipitate after long-term storage at low temperature. If this happens, please warm this solution in a water bath at 37°C and use it after it turns to a clear solution.
2. The Solubilization Solution may cause irritation with direct contact. If the solution is accidentally splashed on skin, please wash with plenty of water.
3. The kit is suitable for the purification of DNA ranging from 50bp to 20kb. Recovery may be slightly lower for DNA which is less than 100bp or larger than 10kb or if DNA content is very low in the sample.
4. 25µl of magnetic beads can bind up to 10µg DNA.