



JUN 13, 2023



Size selection (Purification)

Forked from [Size selection \(Purification\)](#)

Yin-Tse

Tsu-Chun Hung¹, Huang¹¹Kaohsiung Medical University

Yin-Tse Huang

ABSTRACT

Size selection (Purification)

OPEN  ACCESS

DOI:

dx.doi.org/10.17504/protocols.io.x54v9pezzg3e/v1

Protocol Citation: Tsu-Chun Hung, Yin-Tse Huang 2023. Size selection (Purification).

protocols.io<https://dx.doi.org/10.17504/protocols.io.x54v9pezzg3e/v1>

License: This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol and it's working

Created: Jun 13, 2023**Last Modified:** Jun 13, 2023**PROTOCOL integer ID:**

83294

- 1 Calculate the amount of magnetic beads you need and **DISTRIBUTE in a new 1.5 mL eppendorf tube** (Mix the bottle **VIGOROUSLY** to make sure it's homogeneous).

For example, if you have 5 samples to clean up, distribute 49.5 µl in a new 1.5 mL eppendorf

tube.



A	B	C
Sample	Magnetic beads need	Magnetic beads need *1.1
1	9 µl	9.9 µl
2	18 µl	19.8 µl
3	27 µl	29.7 µl
4	36 µl	39.6 µl
5	45 µl	49.5 µl
6	54 µl	59.4 µl
7	63 µl	69.3 µl
8	72 µl	79.2 µl

Note

The ratio is **20µl of sample** use **9µl of magnetic beads** to clean up (0.45X to keep long DNA fragments).

Note

Magnetic bead: BeaverBeads™ DNA Select Isolation

- 2 In each  20 µL sample, add  9 µL magnetic beads in.

Note

Pipetting thoroughly every time before adding to make sure all magnetic beads mixed well.


- 3 Mix sample and beads by **gently flicking** the tube for 5mins  00:05:00

5m

Note

Be gentle, mix too aggressive will make DNA fragmented

- 4 Transfer the tube to the 8-strip magnetic rack.
After all the magnetic beads are arrested, remove the supernatant.

- 5 Add  200 µL 80% ethanol, flip the magnetic rack around to clean the pellet.
Wait until all the magnetic beads are arrested, remove the supernatant.

Note


FRESHLY make 80% ethanol


- 6 Repeat the **step 5**.

- 7 Flash spin the tube, and put on the magnetic rack.
Remove **ANY trace of liquid residuals** using 10 µl pipette.


Note

Caution: DO NOT let the beads crack

- 8 Add  10 µL elution buffer.
Mix gently by flicking the tube and make sure all magnetic beads are dissolved in buffer, then flash spin down the sample.

- 9 Incubate the tube in PCR thermal cycler using "**37_incubation**" program for 10min  00:10:00

10m

- 10** Transfer the tube to the magnetic rack.
After all the magnetic beads are arrested, collect the  10 µL supernatant to a 200 µl PCR tube or a 8-strip PCR tube.
- 11** The clean-up sample is now ready for 2' PCR.