AMPure XP Magnetic Beads PCR Purification Process

We use AMPure XP Magnetic Beads to purify DNA and PCR products for genomic applications. This will remove unused dNTPs, enzymes, etc. The protocol below is modified from the product manual. The beads can be purchased from Beckman Coulter:
https://www.beckman.com/reagents/genomic/cleanup-and-size-selection/pcr

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1. Make enough new 70% ethanol so your have at least 400 µl per sample to be purified.
    -80% ethanol can also be used as indicated in Nanopore protocol.

2. Shake the AMPure XP Magnetic Beads very well before use and shake again before adding them to the DNA. The color of the mixture should appear homogeneous before application.
    -The beads fall out of suspension very quickly so shaking them well immediately before application is critical.

3. Add 1.8 µl of AMPure XP beads per 1 µl of sample and let the mixture rest for 5 minutes at room temperature.
    -For 30 µl of DNA, add 54 µl of beads (30 X 1.8).

4. Put the mixture on a magnetic rack and let it sit for at least 2 minutes until the beads are concentrated against the magnet. The liquid should appear clear.

5. Remove the cleared solution from the tube and discard. Leave 5 µl of liquid in the tube so the beads are not drawn out with the supernatant. Do not disturb the beads!

6. Dispense 200 µl of newly made 70% ethanol alcohol to each sample and incubate at room temperature for 30 seconds. Remove the ethanol and discard.

7. Repeat for a total of two washes.

8. After the second wash, remove as much of the ethanol as possible without disturbing the pellet and let dry for at least 30 seconds. Do not let the pellet dry to the point of cracking.

9. Add 30 µl of molecular biology grade water (or needed volume) and incubate for two minutes.

10. Pellet the beads on the magnetic rack until the liquid is clear and colorless. This should be at least 1 minute.

11. Remove and retain the 30 µl of eluate into a clean 1.5 ml Eppendorf DNA LoBind tube.

Written by Windsor Aguirre – Last Updated Dec/11/23