

AC Block™ Kit

Product No. ACB 04-12

The AC Block™ Kit provides an effective, high throughput tool for cryogenic grinding of samples. The kit includes two AC Blocks™, which are aluminum cooling blocks with absorbent inserts. When charged with liquid nitrogen, the AC Blocks™ release vapor to actively cool samples during the homogenization process. The lightweight block design reduces stress on plate homogenizers normally experienced when using solid aluminum cryogenic blocks. Each AC Block™ holds 12 x 4 ml polycarbonate vials (included), whose durability makes them best-suited for cryogenic grinding.

Each AC Block™ Kit includes: Two AC Blocks™, two Replacement Absorbent Inserts, 48 x 4 ml Polycarbonate Vials, 48 x 4 ml Polyethylene Lined Screw Caps, and 48 x 3/8" 440C Stainless Steel Grinding Balls.

CAUTION: Liquid nitrogen has a temperature of -196°C and can cause severe burns. Exercise caution and wear necessary safety goggles, gloves, and a laboratory coat while handling liquid nitrogen. Always follow your institution's recommended safety guidelines for the safe handling of liquid nitrogen.

Never add liquid nitrogen directly to the vials and tighten caps, as pressure may cause vials to explode. Loosely cap the vials until homogenization, at which time caps should be tightened.

Instructions:

1. Remove the tray and pillow from the CryoCooler™. If a CryoCooler™ is not available, a Styrofoam cooler can be used. Place the AC Block™ in the bottom of the cooler.
2. Add liquid nitrogen to the CryoCooler™ so that the level is even with the grate in the AC Block™. Load loosely-capped vials, with one grinding ball each, into the AC Block™ and incubate for five minutes.
3. Remove vial from the AC Block™, roll the grinding ball into the cap, and unscrew cap. Add sample and then re-insert the grinding ball. Loosely screw on the lined cap and place back into the AC Block™. Repeat until all vials are loaded with sample. Minimize the time vials are out of the AC Block™. Allow the vials to incubate for several minutes to allow samples to freeze.
4. Remove the AC Block™ from the CryoCooler™ and briefly allow excess liquid nitrogen to drain from the bottom holes.
5. Tighten caps and secure the AC Block™ in a high velocity plate homogenizer. Homogenize samples for 1-2 minutes at 1200-1500 rpm.
6. After homogenization is complete, keep samples cold to prevent thawing.

Related Products

Item	Quantity	Product No.
CryoCooler™	1 unit	CG 08-07
4 ml Polycarbonate Vials with Polyethylene Lined Caps	240 each	PCRV 04-240-10
3/8" 440C Stainless Steel Grinding Balls	1000 each	GBSS 375-1000-02
HT Homogenizer™	115V	TR 930145

Please visit our website for more information on cryogenic homogenization <http://opsdiagnostics.com>.