



50 ml Polycarbonate Vials

Product No.
PCRV 50-100-24

The 50 ml Polycarbonate Vials are used for the homogenization of larger samples that are not effectively processed using the 15 ml Polycarbonate Grinding Vials. The 50 ml polycarbonate vials are twice the height of our 15 ml polycarbonate vials and can be used to process up to 3 gm of plant tissue, 8 gm of seed, and 4 gm of animal tissue. Each vial comes with a silicone lined cap, which can be used for both cryogenic and room temperature sample processing.



These 50 ml polycarbonate vials are clear and extremely durable. They can be submerged in liquid nitrogen and immediately used for homogenizing. Their reinforced bottom is specially designed to withstand the force generated by grinding balls during processing at liquid nitrogen temperatures.

The 50 ml polycarbonate vials are sold 100 vials per case, including silicone lined caps. Grinding Balls are sold separately. The vials fit into the standard 15 ml Cryoblocks (up to six vials per block) or OPS Diagnostics' foam vial holders (up to five vials per holder). Vials can be used with the Geno/Grinder® or 1600 MiniG® high throughput homogenizers.

Each case of 50 ml Polycarbonate Vials contains:

- 1 Polyethylene Storage Box with Foam Rack and Neoprene Mat
- 100 50 ml Polycarbonate Vials
- 100 Silicone Lined Polypropylene Screw Caps

Storage/Maintenance:

Vials and caps can be autoclaved at 121°C for 15 minutes. Vials may be washed using detergent and air dried. Alcohol may be used to briefly rinse vials.

Related Products

7/16" Grinding Balls
Silicone Lined Caps
15 ml Polycarbonate Vial Sets

Format

1,000 each
100 each
50 vials, *cap selection varies*

Product No.

GBSS 437-1000-03
CPSL 15-100-19
see website

This product is made for research purposes only, not for clinical use.

WARNING: Do not overfill. Do not use cracked vials and caps. Do not use phenol or chloroform (including TRIzol® and TRI Reagent®) with polycarbonate vials. Follow safety and institutional guidelines for the proper use of Liquid Nitrogen if cryogenic grinding.

If you have questions about this product, please contact OPS Diagnostics:



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908-253-3444



Chat at opsdiagnostics.com



Protocol 50 ml Polycarbonate Vials

The 50 ml Polycarbonate Vials may only be processed in homogenizers with extended clamps (i.e., 1600 MiniG® and Geno/Grinder® series) for ambient processing*, in a similar way one would use a deep well plate.

Protocol

1. Fill vials with grinding media, sample, and buffer (if desired) so that the volume is not less than a quarter full. Vials should not be overfilled as well, no greater than a third of the volume of the vial.

Helpful Tip: Adequate head space is very important for efficient sample homogenization. However, the harder the substance to be ground, the less should be added to each vial.

2. Once the vials are filled and sealed securely with the caps, vials should be placed in the foam holder. To ensure even pressure on the vials when clamped, no less than four vials (one in each corner) should be placed in the foam rack. Some of the vials can be empty. Vials are firmly locked into the homogenizer prior to grinding.

IF USING A GENO/GRINDER® OR OTHER TWO-PLATE MILL, DO NOT RUN WITH ONLY ONE VIAL SET OR ONE PLATE. TWO SETS MUST BE USED TO BALANCE THE PLATFORM – AS WITH A CENTRIFUGE.

3. Grind samples as required. See **GENERAL GUIDELINES** below.

Helpful Tip: It takes approximately 3-6 minutes for tissue samples and 5-8 minutes for seeds at speeds between 1250 and 1500 RPMs. Parameters for different samples must be determined empirically.

GENERAL GUIDELINES**

Sample Type	Sample Mass	Buffer Volume	Bead Beater Speed
Plant	1 – 3 gm	12 ml	High
Seed (dry grind)	4 – 8 gm	none	≤1500 rpm
Animal	2 – 4 gm	12 ml	High

*NOTE: Preloaded vials should be removed from the storage box and placed in **Cryo-Blocks** for cryogenic grinding. See website for [Bead Beating: A Primer](#) for more information on cryogenic grinding.

**See website for [Bead Beating: A Primer](#) for additional guidelines by sample type and format.

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