



## 15 ml Polycarbonate Vial Sets

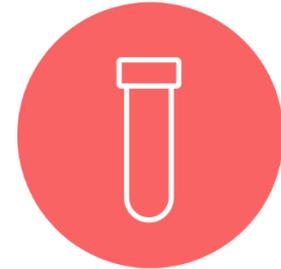
Product No.

PCVS 15-050-01 (Unlined caps)

PCVS 15-050-22 (PE-lined caps)

PCVS 15-050-26 (Silicone-lined caps)

The 15 ml Polycarbonate Vial Sets are designed for the difficult job of dry grinding pooled samples (e.g., corn kernels in field trials), and resilient tissues using plate homogenizers. Polycarbonate vials have a flat, re-enforced bottom and are extremely durable. They can be submerged in liquid nitrogen and used at cryogenic temperatures. (NOTE: Caps can be chilled but should not be submerged in liquid nitrogen).



Vial Sets offer the convenience of preloaded grinding vials for higher throughput sample grinding. OPS Diagnostics offers three basic types of vial sets: 24 Well (4 ml) Polycarbonate Vial Sets, 24 Well (4 ml) Polyethylene Vial Sets, and 15 ml Polycarbonate Vial Sets. Cap selection varies. Unlined caps may be used for dry grinding, while lined caps are recommended for use with buffers.

Vial sets have 5 vials per set and 10 sets per case (50 vials per case).

### Each case of 15 ml Polycarbonate Vial Sets contains:

- 10 Polyethylene Storage Boxes with Foam Rack with Neoprene Mat
- 50 15 ml Polycarbonate Vials (2-8 ml working volume, each)
- 50 Polypropylene Screw Caps (varies by Product No.)
- 100 7/16" 440C Stainless Steel Grinding Balls, 2 per vial

### Storage/Maintenance:

Vials, unlined and silicone-lined caps, and grinding balls can be autoclaved at 121°C for 15 minutes. PE-lined caps cannot be autoclaved. 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 Replacement Vials

### Format

1,000 each

100 each

100 vials, *cap selection varies*

### Product No.

GBSS 437-1000-03

CPSL 15-100-19

*see website*

*This product is 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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## Protocol 15 ml Polycarbonate Vial Sets

The 15 ml Polycarbonate Vial Sets may be used with a mixer mill (e.g., HT Homogenizer II™, Retsch®, 1600 MiniG® or Geno/Grinder®) for ambient processing\*, in a similar way one would use a deep well plate.

### Protocol

1. Remove the lid from the storage box; it can later be re-attached for storage purposes.
2. Remove vial caps and add sample (and buffer, if desired), filling to approximately 1/3 volume (or the equivalent of ~10-15 lyophilized kernels of corn).

**Helpful Tip:** The amount of headspace is very important for efficient sample homogenization. Generally, the harder the substance to be ground, the less should be added to each vial to allow for greater movement. The upper mass of each sample type is best determined empirically. If using buffer, sample and buffer should not exceed 50% volume. NOTE: Over or under filling vials can lead to inefficient homogenization and damage the vial.

3. Replace vial caps and load the entire storage box (without the lid) into the mixer mill. It is important that the vial caps are secured against a hard surface during homogenization or they may loosen. If using an HT Homogenizer II™, caps should rest firmly against the base plate of the carriage.

**Helpful Tip:** Some mixer mills (e.g., 1600 MiniG®, Geno/Grinder®), permit stacking of plates and vials sets to increase throughput with proper use of a stacking tray, per manufacturers' instructions.

**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.**

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

**Helpful Tip:** It takes approximately 5 minutes at 2/3 speed to grind 10-15 corn kernels. Parameters for different samples must be determined empirically.

### GENERAL GUIDELINES\*\*

Sample Type	Sample Mass	Buffer Volume	Bead Beater Speed
Plant	Up to 1 gm	6 ml	High
Seed (dry grind)	≤ 4 gm (10 kernels)	none	High
Animal	Up to 2 gm	6 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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