

Acid Washed, Molecular Biology, & Low Binding Beads

Grinding Beads for Disrupting Yeast, Molds, and Bacteria

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Sample Preparation Products

Low Binding Beads

Less DNA, RNA, and protein stick to the beads, resulting in higher yields and more sensitive assays

100 μ m Zirconium
100 μ m Silica
200 μ m Zirconium
400 μ m Silica
800 μ m Silica



Benefits

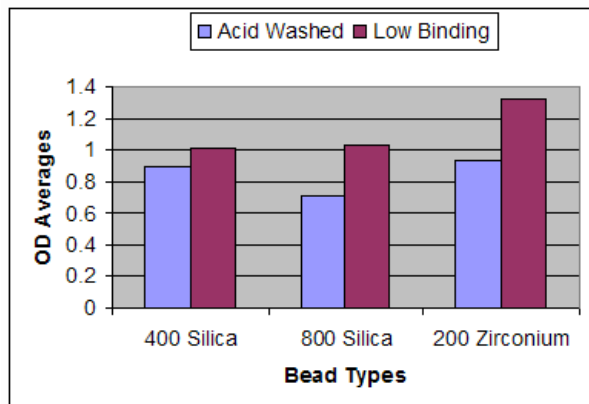
- ❖ Read to use beads, chemically treated to binding less solutes
- ❖ Baked to fully decontaminate prior to use
- ❖ Made from acid washed beads; silica and zirconium dusts and fines removed
- ❖ Available in multiple sizes which are suitable for grinding bacteria, small and large yeasts, filamentous fungi, algae, and pollen

Description

Low Binding Beads are chemically treated so they binding less solutes liberated from homogenized samples. Untreated silica and zirconium beads have surface chemistries that bind DNA, RNA, and proteins upon disruption of cells. Both enzyme and PCR-based assays have lower sensitivity when analytes are liberated using untreated beads. Low Binding Beads yield a greater concentration of solutes and provide greater range and linearity, especially in real-time PCR assays.

Diagnostics now offers pre-filled tubes using our grinding media. Each tube contains 325 μ l of Low Binding Beads in a 2 ml screw-cap microfuge tube. This allows for the homogenization of 650 μ l sample, typically microorganisms, while allowing for the required headspace for efficient disruption by vortexing or bead beating.

Relative Enzyme Activity Liberated from *Saccharomyces* Homogenized with Low Binding and Acid Washed Beads



Low Binding Beads (bottles)

	Product Number	Price
100 μ m Zirconium Beads, Low Binding (250 gm)	BLBZ 100-250-14	\$175
100 μ m Silica Beads, Low Binding (200 gm)	BLBG 100-200-11	\$125
200 μ m Zirconium Beads, Low Binding (250 gm)	BLBZ 200-250-09	\$175
400 μ m Silica Beads, Low Binding (200 gm)	BLBG 400-200-06	\$125
800 μ m Silica Beads, Low Binding (200 gm)	BLBG 800-200-03	\$125

Low Binding Beads (pre-filled tubes)

	Product Number	Price
100 μ m Silica Beads, Low Binding (100/bag)	PFLB 100-100-06	\$99
100 μ m Zirconium Beads, Low Binding (100/bag)	PFLB 100-100-07	\$99
200 μ m Zirconium Beads, Low Binding (100/bag)	PFLB 200-100-08	\$99
400 μ m Silica Beads, Low Binding (100/bag)	PFLB 400-100-09	\$99
800 μ m Silica Beads, Low Binding (100/bag)	PFLB 800-100-10	\$99

Grinding Beads – Acid Washed and Molecular Biology Grade

Acid Washed Beads

Untreated beads are contaminated with broken beads, dust, insects, and microbes. Untreated beads are typically used for sandblasting or other abrasive treatments. Beads need to be cleaned and OPS Diagnostics saves researchers the trouble of washing grinding media by providing acid washed beads. Washing with dilute acid removes heavy metals in addition to soluble contaminants. Beads are oven dried prior to bottling.



Molecular Biology Grade Beads

Like any product being used for DNA and RNA isolation, beads are a potential source of nuclease and nucleic acid contamination. Molecular Biology Grade Beads are made from Acid Washed Beads by further processing the beads by baking. Beads are then packaged aseptically into RNase/DNase-free bottles. Molecular Biology Grade Beads have all the advantages of Acid Washed Beads but with the value of being safe for molecular biology applications.



Benefits

- ❖ Acid washed beads are ready-to-use and void of contaminants present in untreated beads
- ❖ Manufactured using a standard process which generates consistent batches
- ❖ Available in bulk bottles and as pre-filled tubes
- ❖ Decontaminated and suitable for microbiological applications

Benefits

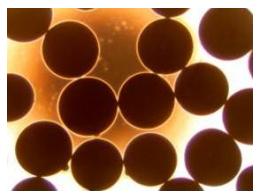
- ❖ Produced from acid washed beads
- ❖ Baked to fully decontaminate prior to use
- ❖ Made from acid washed beads; silica and zirconium dusts and fines removed
- ❖ Available in multiple sizes which are suitable for grinding bacteria, small and large yeasts, filamentous fungi, algae, and pollen

Acid Washed (bottles)	Product Number	Price
100 µm Silica Beads, 200 gm	BAWG 100-200-10	\$85
100 µm Zirconium Beads, 250 gm	BAWZ 100-250-15	\$135
200 µm Zirconium Beads, 250 gm	BAWZ 200-250-07	\$135
400 µm Silica Beads, 200 gm	BAWG 400-200-04	\$85
800 µm Silica Beads, 200 gm	BAWG 800-200-01	\$85

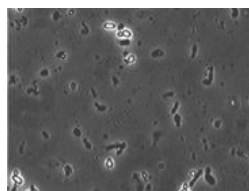
Molecular Biology (bottles)	Product Number	Price
100 µm Silica Beads, 200 gm	BMBG 100-200-16	\$125
100 µm Zirconium Beads, 250 gm	BMBZ 100-250-17	\$175
200 µm Zirconium Beads, 250 gm	BMBZ 200-250-08	\$175
400 µm Silica Beads, 200 gm	BMBG 400-200-05	\$125
800 µm Silica Beads, 200 gm	BMBG 800-200-02	\$125

Acid Washed (pre-filled tubes)	Product Number	Price
100 µm Silica Beads (100 tubes)	PFAW 100-100-01	\$99
100 µm Zirconium Beads (100 tubes)	PFAW 100-100-02	\$99
200 µm Zirconium Beads (100 tubes)	PFAW 200-100-03	\$99
400 µm Silica Beads (100 tubes)	PFAW 400-100-04	\$99
800 µm Silica Beads (100 tubes)	PFAW 800-100-05	\$99

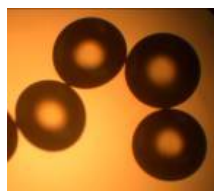
Molecular Biology (pre-filled tubes)	Product Number	Price
100 µm Silica Beads (100 tubes)	PFMB 100-100-11	\$99
100 µm Zirconium Beads (100 tubes)	PFMB 100-100-12	\$99
200 µm Zirconium Beads (100 tubes)	PFMB 200-100-13	\$99
400 µm Silica Beads (100 tubes)	PFMB 400-100-14	\$99
800 µm Silica Beads (100 tubes)	PFMB 800-100-15	\$99



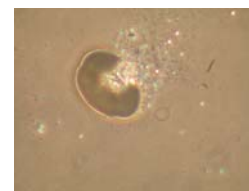
Solid Zirconium Beads (100X)



Yeast ghosts from disruption with
400 µm Silica Beads (200X)



Translucent Silica Beads (100X)



Pollen cracked with 800 µm Silica
Beads (100X)

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