LAARMANN

Innovators in Solids

Features and benefits

- Universal and highly efficient grinding, blending and disruption
- Large range of grinding jars and accessories
- Extremely short processing times
- Designed for high sample throughput
- Reproducible results by digital pre-setting of all working parameters

Fast clamping jars for

- Dry grinding
- Wet Grinding
- Ultra Fine Grinding
- Mechanical alloying

Grinding jars for Static Mixing applications

- Turbulent Blending
- Laminar Blending
- Liquid Dispersion
- Gas Liquid Dispersion

All LAB WIZZ Static Mixers, have some helical mixing element which directs the flow of material radial toward the pipe walls and back to the centre. Additional velocity reversal and flow division results from combining alternating right- and left-hand elements, thus increasing mixing efficiency. All material is continuously and completely mixed, eliminating radial gradients in temperature, velocity and material composition.

Micro vial holder for cell disruption

- Micro vial adapter plate for 10 micro vials
- Micro vial adapter for 4 micro vials

Designed for high analytical screening, the LAB WIZZ efficiently and safely disrupts samples of spores, microorganisms, plant and animal tissue or soil samples at a time.
The samples along with extraction media and small metallic or ceramic balls are placed in micro vials. After 2 minutes of preparation in the LAB WIZZ more than 95% of the cells are disrupted. Because balls and vials plates are disposable the method is ideal for PCR, PAGE, and Probe applications where cross contamination between samples cannot be tolerated.

Stainless steel Micro vials

Stainless steel Micro vials are used for cryogenic grinding of small sample amounts or for standard grinding applications of small samples such as soil or grain using a steel or tungsten carbide bead.
Steel vials ensure a much higher heat transformation in order to optimize the heating and cooling.
The stainless steel Micro vials are available with a grinding ball pre-filling optional.

Ice bath for cryogenic grinding

For heat sensitive materials such as plastics and rubber it is possible to embrittle the material with liquid nitrogen and perform an additional external freezing of the fast clamping jars. Those jars are either made from Teflon or from stainless steel and are suitable for cryogenic grinding applications.

- Insulated Ice bath 4 Liter with Cover
- Tongue for frozen grinding jars
- Safety Glas

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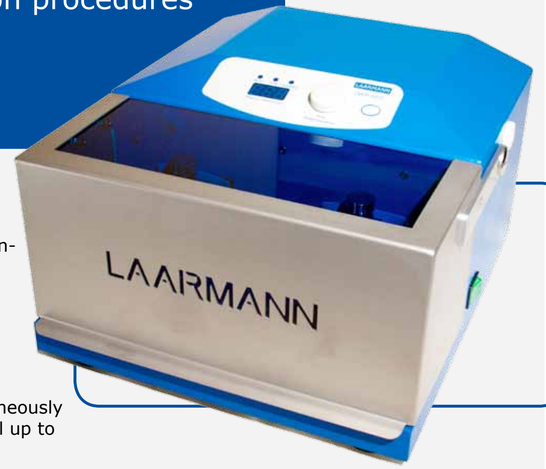
Micro Ball Mill

Lab Wizz

Superior Mill engineered for rapid sample preparation procedures



Dry Grinding / Wet Grinding / Ultra Fine Grinding / Cryogenic Grinding

Turbulent Blending / Laminar Blending / Liquid-Liquid Dispersion / Gas- Liquid Dispersion

Mechanical Alloying

Cell disruption for DNA / RNA extraction

The Lab Wizz can handle simultaneously two or more samples from 0.2 ml up to 160 ml.

Your local contact

TODAY'S® EQUIPMENT

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Lab Wizz with closed "EASY COVER"

Lab Wizz with open "EASY COVER"

Grinding, Blending, Cell Disruption of samples

The Laarmann LAB WIZZ is designed for "1001 laboratory applications". Typical Processing times are at 30 seconds. The LAB WIZZ can prepare 2 or more samples from 0,2ml of up to 160 ml.
It is designed as well for high-sample-throughput.

High operator convenience and maximum safety

Maximum Grinding performance and maximum safety is important for Laarmann Mills. Due to an integrated motor break the machine can only be started when the "Easy Cover" is closed. The unique "Easy Clamp system" allows the simple and safe clamping of all grinding jars up to 160ml.
The grinding chamber, easy clamp system as well as the swinging arm is made from high precision stainless steel to meet all food and pharmaceutical requirements. Due to the new motor concept and a motor drive, the Laarmann LAB WIZZ is maintenance free.

Selection Guide Jar Filling

Recommended Ball Fillings for grinding jars and for static mixer							
		Recommended ball filling					
Grinding jar volume	Feed size	2mm	3mm	12mm	15mm	20mm	25mm
2.00 ml	1mm	3-4 pcs.	2-3 pcs.				
25.00 ml	6mm	to be calculated in ml		2-4 pcs.	1-2 pcs.	1 pcs.	1 pcs.
45.00 ml	7mm			4-7 pcs.	2-3 pcs.	1 pcs.	-
50.00 ml	8mm			5-8 pcs.	3-4 pcs.	1 pcs.	1 pcs.
60.00 ml	9mm			5-8 pcs.	3-4 pcs.	1 pcs.	1 pcs.
100.00 ml	10mm			10-16 pcs.	6-8 pcs.	1-2 pcs.	1 pcs.
160.00 ml	12mm	only combined with a static mixer					

Lab Wizz Application areas

Grinding jars of various materials up to 160 ml

Micro vial adapter plate for micro vials

Holder for mixing of dry substances (XRF Prep)

160 ml jar with helical static mixer for turbulent blending

4 liters Ice bath with cover for cryo applications

Micro Ball Mill LMLW-320/2

One for all Applications

Advantages of the Lab Wizz

Due to the unique combination of a wide range of grinding jars of various materials the LAB WIZZ is capable to practically meet all demands of today's laboratory needs.

Applications

- Grinding (wet and dry)
- Cell disruption
- Mixing XRF Prep
- Turbulent blending (Static Mixer)
- Cold grinding

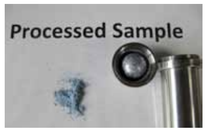
Due to the combination of high energy vibration and the punch of the grinding balls the LAB WIZZ cannot only grind hard and brittle materials but as well all medium soft, soft materials and elastic materials.

Grinding and Mixing examples

Rubber:
50ml steel jar
20 mm steel Ball after cryogenic grinding

Leaves:
Micro vial adapter plate
Micro vials
3mm tungsten carbide bead per vial.
Completely homogenized

Soil sample:
100ml steel jar
25 mm steel ball
40 Micron after
45 seconds



Paper:
100ml jar
25mm steel ball
200µm after
90 seconds

Honey / Water:
160ml steel jar
Static Mixer
Homogeneneous Mixture

Glas:
50ml steel jar
25mm stell ball
100µm after 45 seconds