APPLICATIONS

R&D Biotechnology
Molecular biology and proteomic
Genotype determination

Pharmacology and Toxicology
Toxic analysis, Metabolism studies

Forensic Medicine
DNA/RNA tests, Drugs and toxics detection

Food & Environment
GMO detection, Hygiene controls

Materials research

DISTRIBUTOR

VISIT OUR PROTOCOLS DATABASE
Take a look to scientific publications and other application forms on our website:
www.precellys.com

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www.precellys.com
NEW GENERATION Tissue homogenizer
SAMPLE PREPARATION & CELL LYSIS
Precellys is your solution for sample preparation and cell lysis.
The reliable, fast and high-throughput homogenizer to extract DNA, RNA or proteins from animal, human and plant tissues, micro-organisms, spores, bones, etc.

**FAST** - Homogenize up to 24 samples in few seconds

**EFFICIENT** - Retain integrity of any biological molecule DNA, RNA, protein, drug, etc.

**FLEXIBLE** - Adapt protocols and consumables from soft to hard tissues (micro-organisms, animal or vegetal tissues)

**CROSS CONTAMINATION FREE** - 2mL single-use tubes

**REPRODUCTIBLE** - Standard protocols

**HIGH-QUALITY** - Robust, ergonomic and programmable

Grind and homogenize a large range of biological samples, compatible with any analysis DNA-RNA Electrophoresis, Liquid Chromatography, Western Blot etc.

**ANIMAL & HUMAN TISSUES**

Chromatograms of liquid / liquid extraction from animal tissues.

**PLANT TISSUES**

DNA isolation from plant tissues.

**MICRO-ORGANISMS**

Western Blot from proteins in micro-organisms.

Ready to use 2mL tubes filled with beads

Precellys kit

**CK14 Small Ceramic Beads**

Performs perfect homogenization of any soft animal, human and plant tissues : Brain, liver, leaf, etc.

**CK28 Big Ceramic Beads**

Offers more strength for the homogenization of harder animal, human and plant tissues : Hair, bones, corn, etc.

**MK28 Big Metal Beads**

Gives the ultimate strength to grind challenging samples of animal, human and plant tissues : Heart, nails, nuts, etc.

**VKOI & VKO5 Small Glass**

Special design for micro-organism lysis. Smooth impacts break the membrane of cells, bacterias, spores, etc.
Discover the new Precellys® 24-Dual
The only efficient large volume tissue homogenizer

Now you can choose

- **Duality**: 7 mL & 2 mL tubes
- **Flexibility**: from 1 mg to 5 g
- **Efficiency**: High yield and integrity for DNA, RNA, proteins…

Extend your Precellys® 24 experience with 7 mL lysing tubes. Handle all sample preparations with the same equipment, not only from soft to hard tissues but also from 1 mg to 5000 mg. Maximize your results and save time!

Precellys® 24-Dual tissue homogenizer allows the simultaneous homogenization of six 7 mL lysing tubes or twelve 2 mL lysing tubes.

**7 mL Precellys Lysing Kits**

<table>
<thead>
<tr>
<th>Kit</th>
<th>Contents</th>
<th>Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>CK28</td>
<td>Cat No.0904-01 2.8 mm ceramic beads</td>
<td>Hard tissue homogenizing</td>
</tr>
<tr>
<td>Soil Mix</td>
<td>Cat No.0907-04 Glass and ceramic beads</td>
<td>Soil grinding</td>
</tr>
<tr>
<td>CK01</td>
<td>Cat No.0907-06 0.1 mm ceramic beads</td>
<td>Micro-organism lysing</td>
</tr>
<tr>
<td>VK01/VK05</td>
<td>Cat No.0907-05 Glass mix beads</td>
<td>Micro-organism lysing</td>
</tr>
</tbody>
</table>

To optimize your grinding efficiency add beads of 5.0 mm ceramic beads (03961-1-106) or 6.8 mm ceramic beads (03961-1-107)
## Biological applications – 7 mL vials

<table>
<thead>
<tr>
<th>Samples</th>
<th>Weight</th>
<th>Precellys lysing kit</th>
<th>Buffer</th>
<th>Precellys protocols</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaves basilica</td>
<td>1 g</td>
<td>0904-01</td>
<td>1 ml Buffer</td>
<td>5500 rpm - 2x15s</td>
<td>RNA extraction</td>
</tr>
<tr>
<td>Leaves Thyme</td>
<td>1 g</td>
<td>0904-01</td>
<td>1 ml Buffer</td>
<td>5500 rpm - 2x15s</td>
<td>RNA extraction</td>
</tr>
<tr>
<td>Seeds tomato</td>
<td>2 g (250 seeds)</td>
<td>0904-01 + 2 beads 03961-1-106 + 2 beads 03961-1-107</td>
<td>no buffer</td>
<td>6500 rpm - 2x20s</td>
<td>Virus detection</td>
</tr>
<tr>
<td>Corn grain</td>
<td>1 seed</td>
<td>0904-01 + 2 beads 03961-1-107</td>
<td>no buffer</td>
<td>6000 rpm - 2x30s</td>
<td>DNA extraction</td>
</tr>
<tr>
<td>Durum wheat</td>
<td>1 seed</td>
<td>0904-01 + 1 bead 03961-1-107</td>
<td>1 ml Buffer</td>
<td>6000 rpm - 2x60s*</td>
<td>Enzymatic activity</td>
</tr>
<tr>
<td>Heart</td>
<td>1 g</td>
<td>0904-01</td>
<td>2.4 ml Buffer</td>
<td>6000 rpm - 2x15s</td>
<td>RNA extraction</td>
</tr>
<tr>
<td>Whole lung (rat)</td>
<td>1.2 - 1.4 g</td>
<td>0904-01</td>
<td>3 ml Acetonitril50%</td>
<td>6500 rpm - 2x20s*</td>
<td>Drug extraction</td>
</tr>
<tr>
<td>Whole brain (rat)</td>
<td>1 g</td>
<td>0904-01</td>
<td>4 ml Acetonitril70%</td>
<td>5500 rpm - 2x10s</td>
<td>Drug extraction</td>
</tr>
<tr>
<td>Muscle, Kidney, Liver (Pork)</td>
<td>1 g</td>
<td>0904-01</td>
<td>4 ml Buffer</td>
<td>6000 rpm - 1x20s</td>
<td>Drug extraction</td>
</tr>
<tr>
<td>Lactic bacteria from curd</td>
<td>500 mg</td>
<td>0907-06</td>
<td>5 ml Trizol</td>
<td>6500 rpm - 2x20s</td>
<td>RNA extraction</td>
</tr>
<tr>
<td>Microorganisms from Soil</td>
<td>1 g</td>
<td>0907-04 + 2 beads 03961-1-106</td>
<td>4 ml Buffer</td>
<td>5000 rpm - 3x15s</td>
<td>DNA extraction</td>
</tr>
<tr>
<td>Yeast Brewer’s tablets</td>
<td>2 tablets (0.86g)</td>
<td>0904-01</td>
<td>no buffer</td>
<td>6000 rpm - 2x30s</td>
<td>Fine powdersing</td>
</tr>
</tbody>
</table>

* With Cryolys cooling option.

## Cool your samples with Cryolys

Combine yield and integrity of thermo sensible molecules with the association of Cryolys cooling option and Precellys®24-Dual. Precellys® 24 system is the only cooled equipment using bead beating in large volume.

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**The key ? Precellys®24**
The perfect solution for grinding, lysing and homogenizing biological samples.
Choose the Precellys lysing kit for your samples!

**Problem**

**Solution**

The key? Precellys®24
The perfect solution for grinding, lysing and homogenizing biological samples.

**Precellys lysing kits**

MicroTubes prefilled with beads
0.5mL - 2mL - 7mL
### HOMOGENIZE!

**CK4**
1.4 mm ceramic beads
- Cat. No. 03961-1-203 (0.5mL tubes)
- Cat. No. 03961-1-003 (2mL tubes)

**Soft tissue homogenizing**

- Application Example:
  - Prion extraction for ESB
  - RNA extraction for mouse liver

### GRIND!

**MK28**
2.8 mm metal beads
- Cat. No. 03961-1-001 (2mL tubes)
- Cat. No. 03961-1-008 (2mL reinforced tubes)

**Hard tissue grinding**

- Application Example:
  - DNA extraction from rice Grain for GMO determination
  - Pulverization of Hair for drugs analysis

### LYSE!

**VK05**
0.5 mm glass beads
- Cat. No. 03961-1-204 (0.5mL tubes)
- Cat. No. 03961-1-004 (2mL tubes)

**Tough micro-organism lysing**

- Application Example:
  - Proteins extraction from Mycobacterium Smegmatis

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**CK28**
2.8 mm ceramic beads
- Cat. No. 03961-1-002 (2mL tubes)
- Cat. No. 03961-1-007 (2mL reinforced tubes)
- Cat. No. 0904-01 (7mL tubes)

**Hard tissue homogenizing**

- Application Examples:
  - Proteins extraction from mouse heart
  - RNA extraction from human skin

**Soil Mix**
Glass and ceramic mix beads
- Cat. No. 03961-1-006 (2mL tubes)
- Cat. No. 0907-04 (7mL tubes)

**Soil grinding**

- Application Example:
  - DNA/RNA extraction from environmental samples

**VK01 - VK05**
- VK01 = 0.1 mm glass beads
- VK01 / VK05 = glass mix beads
- VK05 = 2.8 mm metal beads
- VK05 = ceramic mix beads
- VK05 = 0.1 mm ceramic beads
- VK05 = 2.8 mm ceramic beads
- VK05 = 0.5 mm glass beads

**Micro-organism lysing**

- Application Example:
  - Recombinant proteins extraction from E.Coli

**CKMix**
Ceramic mix beads
- Cat. No. 03961-1-009 (2mL tubes)

**Tissue homogenizing**

- Application Example:
  - DNA extraction from leaf

**Big beads for 7 mL**

Add beads in your 7 mL lysing tubes to optimize your grinding efficiency

**Application Example:**

- Cat. No. 03961-1-106 = 5.0mm Zirconium oxide beads
- Cat. No. 03961-1-107 = 6.8mm Zirconium oxide beads

**Application Examples:**

- Virus detection from tomato seeds
- DNA extraction from Microorganisms from soil
  - Add 2 beads of 03961-1-106 in the 7mL tubes 0907-04

**CK01**
0.1 mm ceramic beads
- Cat. No. 0907-06 (7mL tubes)

**Micro-organism lysing**

**Application Example:**

- RNA extraction from Lactic bacteria from curd

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Login and find application protocols
www.precellys.com – Application Center
For customer support, email us
precellys@bertin.fr

Ready-to-use
Quantity discount available

50 preps
Minilys
The efficient & personal homogenizer

Minilys is a small and compact homogenizer for fast and hands-free disruption of a wide range of biological samples (prior to DNA, RNA, proteins or drugs) at a low throughput level. Flexible (0.5ml, 2ml, 7ml lysing tubes) and easy to handle, it is the only homogenizer that works in 3D motion, following standard protocols and providing more homogeneous results.

www.precellys.com
Minilys, the efficient and personal homogenizer fully-adapted to daily lab workflows

Minilys is a small and compact homogenizer for fast and hand-free disruption of a wide range of biological samples (prior to DNA, RNA, proteins or drugs extraction) at a low throughput level. Flexible (0.5ml, 2ml, 7ml lysing tubes) and easy to handle, it is the only homogenizer that works in 3D motion, following standard protocols and providing more homogeneous results. Moreover, Minilys fits every scientist's budget. Bertin Technologies has developed the Precellys range based on bead-beating technology that is growing today with Minilys personal homogenizer.

Minilys bead-beating principle: validated, efficient and rapid method

Put your sample in your chosen lysing kit and load the tubes in the Minilys (0.5ml, 2ml, 7ml).
Block the tubes easily and safely, close the lid; set the time and the speed and push Start.
After 30sec to 4min. get your sample ready for DNA, RNA, Proteins extraction.
Get reliable & reproducible results by RT PCR, Western-Blot, GC/MS...

Minilys

Technical features

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat n°</td>
<td>06404-200-RD000</td>
</tr>
<tr>
<td>Capacity</td>
<td>3 x 2ml tubes or 1 x 7ml tube</td>
</tr>
<tr>
<td>Speed</td>
<td>3 different speeds (3000-4000-5000)</td>
</tr>
<tr>
<td>Time of use</td>
<td>5s to 240s, 1s increment</td>
</tr>
<tr>
<td>Size &amp; weight</td>
<td>160mm (6 in) wide – 7kg</td>
</tr>
<tr>
<td>Motion</td>
<td>3D motion</td>
</tr>
<tr>
<td>Consumables</td>
<td>Compatible with Precellys Lysing kits</td>
</tr>
<tr>
<td>Norms</td>
<td>CE, UL</td>
</tr>
<tr>
<td>Electricity &amp; Power</td>
<td>220V-110V / 50-60hz - &lt; 1000VA</td>
</tr>
<tr>
<td>Noise</td>
<td>&lt;70dB</td>
</tr>
</tbody>
</table>

Find your local Distributor & Application on www.precellys.com

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www.precellys.com
cryolys
advanced temperature controller

- Optimal Temperature Process
- Premium Quality Grinding
- Reliable & Quick Results

The new generation in temperature control during homogenization

bertin TECHNOLOGIES
As lysis is one of the most decisive steps in sensitive sample preparation, you can now trust Cryolys, the advanced temperature controller for cooling samples during Precellys 24 homogenization.

**Principle**

Cryolys new technology offers a solution to overcome the heat limitation of regular grinding.

1. Compressed air goes through liquid nitrogen in the Cryolys.
2. Cold compressed air is sprayed inside the Precellys 24 specific cover.
3. The samples are cooled during grinding at high speed. Active ingredients are preserved.

**Efficient biological sample preservation**

Keep tissue at optimal temperature during homogenization

Now you can regulate temperature inside tubes and reveal molecules of interest. See below the temperature profile in Precellys 24 tubes with Cryolys. Temperature remains the same after homogenisation.

Protect temperature-sensitive molecules from degradation

Lysis is a possible source of loss. Cryolys technology permits temperature-sensitive molecules to keep their native state for any analysis.

Prevent enzymes from becoming active

As grinding heats up the specimen, degrading enzymes are active and can alter and even destroy the molecules of interest.

**Settings**

Compressed Air flow rate: 80, 100 and 120 L/min

1 Litre Liquid Nitrogen for 5 minutes run time

**Connection requirements**

Air inlet connection: 3/8 BSP female

or grooved nipple for 10 mm diameter hose

Air inlet requirement: Dry air (H2O < 5 ppm)

**Technical specifications**

CE marked

Dimensions: 430 x 300 x 300 mm

Weight: 13.6 kg

Power requirement: 110 - 220 V, 2A

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