## Application field:
Glass / Ceramics

## Material:
Aluminium Sulfate ($\text{Al}_2\text{SO}_3$) / Montmorillonite ($\text{Al}_2[\text{OH}_2]/[\text{Si}_4\text{O}_{10}] * \text{nH}_2\text{O}$)

<table>
<thead>
<tr>
<th>Feed size:</th>
<th>0-100 µm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed quantity:</td>
<td>35 g (per batch)</td>
</tr>
<tr>
<td>Material specification(s):</td>
<td>hard brittle, dry</td>
</tr>
<tr>
<td>Customer requirement(s):</td>
<td>Dry grinding; particle sizes about 10 µm;</td>
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<tr>
<td>Subsequent analysis:</td>
<td>Not defined</td>
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</tbody>
</table>

## Solution:

**Selected instrument(s):**
PM 100 CM Planetary Ball Mill

**Configuration(s):**
- Grinding jar, 125 ml, Zirconia;
- 25 Grinding balls Zirconia, Ø 10 mm

**Parameter(s):**
- Revolution speed 400 min-1;
- Time: 35 min.

**Achieved result(s):**
- $d_{50} = 7.8$ µm (90% < 16.3 µm; 70% < 10.6 µm);
- measured by Laser "Horiba LA 300";

**Remark(s):**
To avoid a particle agglomeration during milling, 6 drops of methanol were added. For particle size analyzation by laser scattering it was necessary to disperse a small amount of the powder in water.

**Recommendation:**
For colloidal grinding of hard-brittle and dry materials the Planetary Ball Mill PM 100 CM is suitable under the above mentioned conditions.

The application report is based solely on the processing of the available sample material in the indicated amount. No legal claims shall be derived from this test report.
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