**Task:**

**Application field:** Building Materials

**Material:** Quartz, Copper slag, Copper matte, River sand, limestone

**Feed size:** 5-8 mm (after pre-crushing)

**Feed quantity:** 100 g (per sample)

**Material specification(s):** Hard, brittle

**Customer requirement(s):** < 150 µm (100 mesh)

**Subsequent analysis:** X-ray Fluorescence Analysis

**Solution:**

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

**Configuration(s):** Grinding jar 250 ml of stainless steel
5 Grinding balls 30 mm Ø of stainless steel

**Parameter(s):** Rotation speed 450 rpm

**Time:** 5 - 10 min. (per sample)

**Achieved result(s):** 70 - 75 % < 150 µm after 5 min.
92 - 95 % < 150 µm after 10 min.

**Remark(s):** A pre-crushing of the original sample, seize up to 30 mm, was done in the Jaw Crusher BB 200.
During fine grinding of lime stone, it is useful to add 6 - 8 drops of methanol into the jar, to avoid sticking effects of the material.

**Recommendation:** For fine grinding of hard and brittle minerals and slags the Planetary Ball Mill PM 100 CM is suitable under the above mentioned conditions.