

**Task:****Application field:** Agriculture**Material:** Soil samples, with high content of clay and minerals**Feed size:** 0-10 mm (different to the samples)**Feed quantity:** 120 g**Material specification(s):** dry**Customer requirement(s):** 100 - 150 ml appx. < 50 µm**Subsequent analysis:** ICP Inductive Coupling Plasma**Solution:****Selected instrument(s):** PM 100 CM Planetary Ball Mill**Configuration(s):** Grinding jar 250 ml, Sintered alumina (Al<sub>2</sub>O<sub>3</sub>);  
5 grinding balls, Sintered alumina, 30 mm Ø**Parameter(s):** Revolution speed 450 rpm**Time:** 10 min. (per sample)**Achieved result(s):** 98 % < 50 µm  
see samples**Remark(s):** Mostly samples must be dried before grinding.  
To avoid sticking effects of the material during grinding, it is necessary to add 5 - 8 drops of methanol into the jar.**Recommendation:** For fine grinding of dry soil samples, 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.

Subject to technical modification and errors.

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**Pictures of the sample**



**Fig. 1: Soil with clay**



**Fig. 2: Soil with minerals**