Task:

Application field: Glass / Ceramics

Material: Kaolin powder, china clay

Feed size: 0-1 mm

Feed quantity: 100 g (+ 150 ml isopropanol)

Material specification(s): medium-hard, smeary

Customer requirement(s): < 0.5 µm, research project

Subsequent analysis: Colour Measurement

Solution:

Selected instrument(s): PM 400 Planetary Ball Mill

Configuration(s): 2 Grinding jars, 500 ml, Zirconia; per jar 300 ml grinding balls Zirconia Ø 3 mm

Parameter(s): 320 rpm

Time: 5 h (per batch)

Achieved result(s): d50 = 1.4 µm
d90 = 6.3 µm
the measurement of the particle distribution was done by laser diffraction "HORIBA 300"

Remark(s): A higher end fineness can be reached by changing the grinding beads into Ø 2 mm

Recommendation: For fine grinding and kolloidal applications the Planetary Ball Mill PM 400 is suitable under the above mentioned conditions.