**Task:**

**Application field:** Chemistry / Plastics  

**Material:** Titanium dioxide  

**Feed size:** 0-10 mm  

**Feed quantity:** 80 g (per test)  

**Material specification(s):** medium-hard  

**Customer requirement(s):** < 1 µm, grinding in RS 200 and RM 200  

**Subsequent analysis:** X-ray Diffraction  

**Solution:**

**Selected instrument(s):** Mortar Grinder RM 200  

**Configuration(s):**  

**RS 200:** Grinding set of tungsten carbide (WC) 100 ml;  

**RM 200:** Mortar of tungsten carbide; Pestle of tungsten carbide  

**Parameter(s):** speed RS 200 = 1200 rpm  

**Time:** 5 min.  

**Achieved result(s):** < 10 µm  

**Remark(s):** As requested both tests have been done in the Vibratory Disc Mill and Mortar Grinder. However, because of the properties the material sticks on the grinding tools of the grinding set. A sample preparation without sticking effects is possible in the Ultra Centrifugal Mill ZM 200.  

**Recommendation:** For sample preparation of titanium dioxide both machines, the Vibratory Disc Mill RS 200 and the Mortar Grinder RM 200 are suitable under the above mentioned conditions.
Pictures of the sample

**Fig. 1:** After grinding, material sticks at the grinding tools

**Fig. 2:** After grinding, material sticks at the grinding tools

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. © Retsch GmbH - www.retsch.com - lab@retsch.com