**Task:**

**Application field:** Chemistry / Plastics  
**Material:** PET, granulate and flakes  
**Feed size:** 3-10 mm  
**Feed quantity:** 20 g (per batch)  
**Material specification(s):** elastic, temperaturesensitive  
**Customer requirement(s):** < 200 µm determination of acetaldehyde  
**Subsequent analysis:** HPLC High Performance Liquid Chromatography

**Solution:**

**Selected instrument(s):** ZM 200 Ultra Centrifugal Mill  
**Configuration(s):** Push-fit rotor of stainless steel with 12 teeth; Ring sieve of stainless steel, Conidur holes 0.5 mm  
**Parameter(s):** Revolution speed 18000 rpm  
**Time:** 3 min. (per sample)  
**Achieved result(s):** predominantly < 300 µm  
**Remark(s):** The disintegration of the plastic samples is only possible after pre-treatment with liquid nitrogen, pre-cooling before grinding. If a ring sieve < 0.5 mm is used, the material smears on the grinding tools, even with cooling.

**Recommendation:** For fine grinding of plastic materials the Ultra Centrifugal Mill ZM 200 is suitable under the above mentioned conditions.