### Task:

**Application field:** Chemistry / Plastics  
**Material:** Polypropylene extrudate  
**Feed size:** 80-200 mm (length)  
**Feed quantity:** 150 g  
**Material specification(s):** elastic, temperature sensitive  
**Customer requirement(s):** < 5 mm, pre-cutting for further fine grinding tests in the Ultra Centrifugal Mill ZM 200  
**Subsequent analysis:** Recycling process

### Solution:

**Selected instrument(s):** SM 100 Cutting Mill  
**Configuration(s):** Standard hopper;  
Bottom sieve of stainless steel, square holes 6 mm;  
Ring-type filter with Conidur hole body for collecting receptacle 5 l  
**Parameter(s):** Revolution speed 1500 rpm  
**Time:** 3 min. (for pre-cutting)  
**Achieved result(s):** predominantly < 5 mm  
**Remark(s):** The fine grinding of a representative single sample was done in the Ultra Centrifugal Mill ZM 200, ring sieve 0.75 mm. Pre-cooling of the PP granulate with liquid nitrogen (LN2) is necessary.

**Recommendation:** For the pre-grinding of temperature sensitive materials the Cutting Mill SM 100 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. 
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Pictures of the samples

**Fig. 1:** Original extrudate

**Fig. 2:** After pre cutting in SM 100 with bottom sieve 6 mm

**Fig. 3:** After fine grinding in ZM 200 with ring sieve 0.75 mm

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