## Task:

**Application field:** Environment  
**Material:** Waste samples: pulp; solid mixed fuel; pelleted refused derived fuels; fluff as refused derived fuels  
**Feed size:** 10-40 mm  
**Feed quantity:** 2000 ml (per batch)  
**Material specification(s):** medium-hard, soft  
**Customer requirement(s):** < 500 - 200 µm;  
**Subsequent analysis:** determination of ashes, moisture, calorific value

## Solution:

**Selected instrument(s):**  
- SM 2000 Heavy-Duty Cutting Mill  
- ZM 200 Ultra Centrifugal Mill  
**Configuration(s):**  
1. SM 2000: standard hopper; bottom sieves of stainless steel with square holes of 6 mm; ring-type filter with trapezoid hole body for collecting receptacle 5 l;  
2. ZM 200: Push-fit rotor of stainless steel with 12 teeth; ring sieves of stainless steel 0.5 mm and 1 mm.  
**Parameter(s):** Revolution speed SM 2000: 750 min$^{-1}$  
Revolution speed ZM 200: 18000 min$^{-1}$  
**Time:** 10 min. (per sample)  
**Achieved result(s):** predominantly < 200 µm (s. samples)
Remark(s): The grinding of waste material to a fineness of < 200 µm is only possible in the air dried state.
1. Pre-cutting of the complete dried sample in the Heavy Duty Cutting Mill SM 2000, bottom sieve 6 mm;
2. Fine-grinding of a representative sample in the Ultra Centrifugal Mill ZM 200, possible in two steps with ring sieve 1.0 respectively 0.5 mm.

Recommendation: For the grinding of dry refused derived fuels the above mentioned work flow should be followed.