Task:

Application field: Chemistry / Plastics

Material: Green Epoxy Resin Chips

Feed size: 10-20 mm (size of the chips)

Feed quantity: 700 g

Material specification(s): hard brittle, temperature sensitive

Customer requirement(s): 50 % < 325 mesh (45 µm)
no further informations

Subsequent analysis: not defined

Solution:

Selected instrument(s): ZM 200 Ultra Centrifugal Mill

Configuration(s): Push-fit rotor ZM 200 of stainless steel with 12 teeth;
Ring sieve of stainless steel, 0,25 mm trapezoid holes;
Cyclone with passage receptacle and 5 l collector

Parameter(s): Revolution speed 18 000 prpm

Time: 10 min.

Achieved result(s): 65 % < 45 µm

Remark(s): The grinding is only possible by pre-cooling the Epoxy Resin with liquid nitrogen.

Recommendation: For sample preparation of temperature sensitive materials the Ultra Centrifugal Mill ZM 200 is suitable under the above mentioned conditions.
Pictures of the sample

Fig. 1: Original Epoxy Resin sample

Fig. 2: After grinding in ZM 200, fine powder shows agglomerates