Task:

Application field: Environment

Material: Punching and cutting waste of ductile materials (mixture of rubber and abrasives)

Feed size: < 10 mm

Feed quantity: 80 g

Material specification(s): dry, ductile

Customer requirement(s): < 100 µm, digestion in aqua regia, GC and loss on ignition

Subsequent analysis: GC Gas 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 with wear resistant coating, Trapezoid holes 1.0 / 0.5 mm

Parameter(s): Rotational speed: 18000 rpm

Time: 5 min. (per batch)

Achieved result(s): 70 % < 100 µm
90 % < 200 µm

Remark(s): The sample preparation must be done in two steps:
1. using a ring sieve of 1.0 mm;
2. fine grinding using a ring sieve of 0.5 mm.

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