Task:

Application field: Food

Material: Noodles ("Pates alimentaires", 5 samples: tubes, Penne, Tagliatelle, Farfalle, Spaghetti)

Feed size: < 1 cm, max. length 4 cm (some forms pre-broken by hand)

Feed quantity: 170 - 470 g

Material specification(s): medium-hard, brittle

Customer requirement(s): approx. 500 µm; 300 - 500 g/batch

Subsequent analysis: Water Content; Infrared-Spectroscopy

Solution:

Selected instrument(s): Ultra Centrifugal Mill ZM 200

Configuration(s): Push-fit rotor, 12 teeth, stainless steel; Ring sieve trapezoid holes 0.75 mm, stainless steel; Cyclone, with 3 litres collector

Parameter(s): Revolution speed: 18000 rpm

Time: 30 - 60 s (for 100 g)

Achieved result(s): predominantly < 500 µm

Remark(s): Before grinding, spaghtetti and tagliatelle have to be pre-broken to a length of 3 - 4 cm and farfalle to a size of approx. 1 cm. For amounts > 200 g the usage of a cyclone is recommended in order to prevent heating.

Recommendation: For grinding of noodles the Ultra Centrifugal Mill ZM 200 is suitable under the above mentioned conditions.
Pictures of the sample

**Fig. 1:** Original samples: spaghetti (above), Tagliatelle, Penne, Farfalle, tubes (from the left to the right)

**Fig. 2:** after grinding in ZM 200