Task:

Application field: Food

Material: Spice mixture (chili, rosemary, thyme, ...)

Feed size: 2 - 30 mm

Feed quantity: 1650 g (approx.)

Material specification(s): fibrous, containing oil

Customer requirement(s): < 250 µm; 3 kg/day; blending with other spices

Subsequent analysis: not defined

Solution:

Selected instrument(s): Cutting Mill SM 100
Ultra Centrifugal Mill ZM 200

Configuration(s): SM 100:
Base frame; Standard hopper for SM 100;
Ring-type filter with trapezoid hole body for collecting receptacle 5 l;
Bottom sieve of stainless steel, square holes 2 mm

ZM 200:
Push-fit rotor with 12 teeth, stainless steel;
Ring sieve trapezoid holes 0.5 mm, stainless steel;
Cyclone with passage receptacle and holder, with 5 l collector; Vibratory Feeder Kit DR 100

Parameter(s): Revolution speed: SM 100: approx. 1500 rpm
ZM 200: 18000 rpm

Time: 4 min. (SM 100); approx. 8 min. (ZM 200)

Achieved result(s): SM 100: 3 - 4 mm
ZM 200: 60 % < 250 µm
Remark(s): The whole sample is pre-ground using the Cutting Mill SM 100. The pre-ground sample afterwards is fine ground in the Ultra Centrifugal Mill ZM 200.

Recommendation: The Cutting Mill SM 100 and the Ultra Centrifugal Mill ZM 200 are suitable to grind the sample material under the above mentioned conditions.

Pictures of the sample

Fig. 1: Spice mixture

Fig. 2: Pre-ground spice mixture with Cutting Mill SM 100; bottom sieve 2 mm square holes

Fig. 3: Fine ground spice mixture with ZM 200; ring sieve 0.5 mm trapezoid holes