# Task:

**Application field:** Food

**Material:** Dates, green coffee, cacao residues, energetic bars with muesli, jellies, chewing gum tabletts, base gum

**Feed size:** 0-30 mm (depending on the sample)

**Feed quantity:** 50 g per batch

**Material specification(s):** soft, smeary, elastic

**Customer requirement(s):** Homogeneous, < 800 µm for different food analytics

**Subsequent analysis:** NIR Near Infra Red Spectroscopy

---

## Solution:

**Selected instrument(s):**
- GM 200 Knife Mill Grindomix
- ZM 200 Ultra Centrifugal Mill

**Configuration(s):**
- GM 200 Receptacle of stainless steel with standard lid (PP) for hard materials
- GM 200 Receptacle of glass with standard lid (PP)
- ZM 200 push-fit rotor with 12 teeth, distance ring sieve 1 mm

**Parameter(s):**
- GM 200 = 6000 rpm Intervall, grinding time 15 - 30 sec. per sample
- ZM 200 = 18000 rpm

**Time:** 120 s (max. time per sample)

**Achieved result(s):** Homogeneous, predominantly < 1 mm,

**Remark(s):** The samples "bars with muesli" and "base gum" should be grind with 20 ml talcum in the GM 200. The samples "green coffee" and "jellies" can only be grind in ZM 200, with distance ringsieve 1 mm. Before grinding the "jellies" cool down with liquid nitrogen.

The application report is based solely on the processing of the available sample material in the indicated amount. No legal claims shall be derived from this test report. Subject to technical modification and errors.

© Retsch GmbH - www.retsch.com - lab@retsch.com
and add some talcum in the recaptacle pan. This avoids sticking effect of the milled particles.

**Recommendation:** For disintegration of samples with different breaking properties, the GM 200 and the ZM 200 are suitable under the above mentioned conditions.