**Task:**

- **Application field:** Food
- **Material:** PET-Preforms
- **Feed size:** 1-5 mm (after pre-grinding in Cutting Mill SM 300)
- **Feed quantity:** 6 g (after pre-grinding in Cutting Mill SM 300)
- **Material specification(s):** medium-hard, temperature sensitive
- **Customer requirement(s):** < 0.5 mm, determination of acetaldehyde
- **Subsequent analysis:** GC Gas Chromatography

**Solution:**

- **Selected instrument(s):** Cutting Mill SM 300, CryoMill
- **Configuration(s):**
  - SM 300: Parallel section rotor SM 300, stainless steel; Bottom sieve square holes 6 mm, stainless steel;
  - CryoMill: Grinding jar stainless steel 50 ml for CryoMill; Grinding ball stainless steel 25 mm ø
- **Parameter(s):** SM 300: Revolution speed 1200 rpm
  - CryoMill: Frequency 25 Hz
- **Time:** 2 x 2 min. (1 min intermediate cooling; for fine-grinding)
- **Achieved result(s):** predominantly < 0.5 mm
- **Remark(s):** The whole sample amount is pre-ground using the Cutting Mill SM 300. A representative part sample is afterwards fine-ground with the CryoMill. Pre-cooling time CryoMill 8 min

**Recommendation:** The preparation of PET-preforms can be carried out under the above mentioned conditions.
Pictures of the sample

**Fig. 1:** Original sample PET-preforms

**Fig. 2:** PET-preforms after pre-grinding in the Cutting Mill SM 300

**Fig. 3:** PET-preforms after fine-grinding in the CryoMill