

Seeds grinding for detection of genetically modified organisms (GMOs) using the Precellys® Evolution

CONTEXT

GMOs are increasing worldwide and the task of the laboratories in charge of the compliance tests of food, feed or seed samples with their relevant regulations as well. Protein and DNA-based methods are widely applied in the GMOs analysis. The first step is the homogenization/grinding of raw material and food ingredients before extraction of protein or DNA from those given samples.

MATERIAL

- Precellys® Evolution homogenizer
- Precellys® Lysing Kits: CKMix50_7mL (KT03961-1-306.7) for all samples except Corn: 7mL empty tube (KT03961-1-404.7) + 2 CK68 beads (KT03961-1-107.BK).
- Sample: 1g of seeds (Coral lentils, Green beans (flageolet), White beans, Barley seeds, Whole rice, Grains of corn).
- No buffer (dry grinding).

PROTOCOL

- Precellys® Evolution:
Coral lentils: 7200rpm, 1x30sec.
Green beans, White beans, Barley seeds: 7200rpm, 2x30sec, 30s break.
Whole rice: 7500rpm, 3x20sec, 60s break.
Grains of corn: 7200rpm, 9x30sec, 60s break.
- 100mg or 200mg of grinding sample material was extracted.
- Analysis: Protein based testing methods (western blot, ELISA....) or DNA-based testing methods (Southern blot, quantitative real-time PCR....).

RESULTS

With the Precellys® Evolution, 1g of seeds are efficiently grinded, even Corn, under dry conditions in 7mL Precellys® lysing kit before DNA or protein extraction (Figure 1).

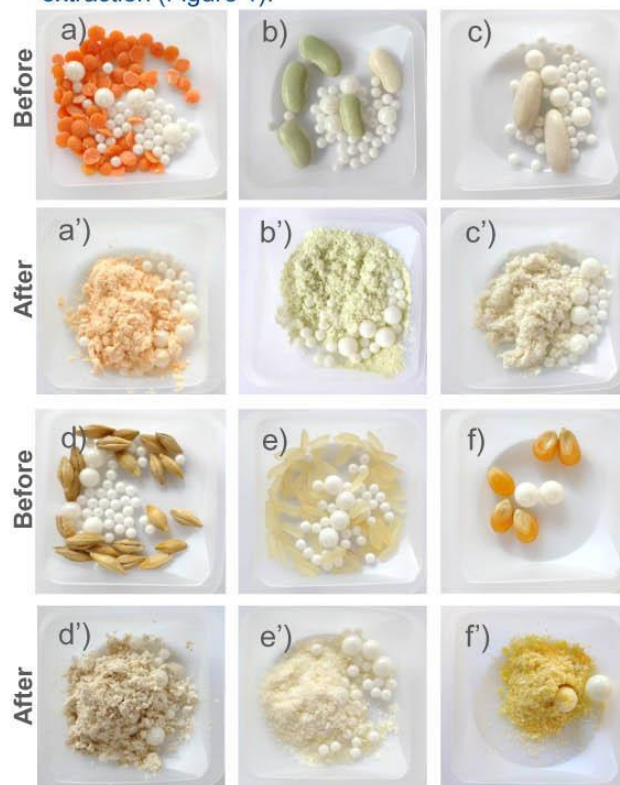


Figure 1: a) Coral lentils, b) Green beans (flageolet), c) White beans, d) Barley seeds, e) Whole rice, f) Grains of corn before (') grinding using Precellys® Evolution.



03712-810-DU091

CONCLUSION

Precellys® Evolution homogenizer is the ideal tool to quickly grind seeds samples, even Corn, under dry condition and avoiding cross-contamination before DNA or Protein extraction. 1 to 12 prep (1g/7mL tube) can be homogenized at the same time.

Precellys® Evolution is a versatile and efficient high-throughput homogenizer for labs performing GMOs testing.

bertin
TECHNOLOGIES



イムエス機器株式会社

<http://www.technosaurus.co.jp>

□東京 〒162-0805 東京都新宿区矢来町 113 番地 TEL (03) 3235-0661(代) / FAX (03) 3235-0669
□大阪 〒532-0005 大阪市淀川区三国本町2丁目12番4号 TEL (06) 6396-0501(代) / FAX (06) 6396-0508
□福岡 〒812-0054 福岡市東区馬出 1 丁目 2 番 23 号 TEL (092) 631-1012(代) / FAX (092) 641-1285

※会社名および商品名は、各会社の商標または登録商標です。
※本カタログに記載の規格・仕様・外観は予告なく変更する場合がありますので御諒承下さい。

【Precellys Evolutions を用いた GMO 検出のための種子の破碎 (レンズ豆、グリーンビーンズ、白インゲン、大麦、米、トウモロコシ)】

Precellys-APS-1412-66