



HAIR GRINDING IN 7ML TUBE

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/ CONTEXT

Forensic or Toxicology laboratories working with hard samples such as hair experience difficulties with extraction due to the high energy needed to grind these tissues. The Precellys homogenizers provide high speed sample disruption based on bead-beating for the extraction of DNA, proteins, and drugs. In combination with Precellys, the MK28R_2mL allows to grind perfectly up to 200 mg of hair.

Most of the time, biological evidence is available in small quantities but in some cases, laboratories need to grind larger quantities of hair. This study is aimed at developing a protocol for the grinding of 1 to 2 grams of hair in a 7mL tube.

/ MATERIALS

- Precellys® Evolution
- Precellys kit : MK28 beads in bulk (KT03961-1-101.BK) + 7 mL empty tubes (KT03961-1-404.7)
- Sample : 1g of 1cm pre-cut hair

/ PROTOCOL

Place 15 MK28 beads inside a 7 mL tube
 Add 1g of 1cm pre-cut hair into the tube
 Precellys® Evolution : 7200 rpm – 3 x 20s (20s of break)

/ RESULTS

After 3 runs of 20s on the Precellys Evolution, the hair is fully ground.



1g of hair before grinding



1g of hair after grinding with Precellys
 (7200 rpm – 3 x 20s (20s of break))

/ CONCLUSION

This new lysing kit, MK28 7mL, allows for efficient grinding with highly reproducible results on the Precellys homogenizers, particularly for large quantities of hair. Larger amounts of hair are also easily loaded into the 7mL tubes, which is important for routine toxicology work.