

Drug extraction from brain, muscle rat tissues PharmOptima, Portage MI, USA

CONTEXT

PharmOptima focuses on **in vivo and in vitro DM&PK and Discovery Services**, providing IND & NDA-enabling research protocols. High quality DM&PK and Ocular PK research are a part of the laboratory's daily activities.

PharmOptima lab currently uses Precellys to homogenize a variety of animal tissues. In this study, Minilys has been compared with Precellys to homogenize brain and rat muscle.

MATERIAL

- Minilys vs Precellys Dual homogenizer
- Precellys kit: 03961-1-009 (mix ceramic beads).
- Sample: Thawed brain (~450mg) and muscle (~200mg).
- Buffer: 2 volumes of sodium chloride solution.

PROTOCOL

- Brain tissue (triplicate):
 - Minilys/Precellys: 5000 rpm, 2x45sec (15sec break).
- Muscle tissue (triplicate):
 - Minilys: 5000 rpm, 3x40sec (15sec break).
 - Precellys: 5500 rpm, 3x30sec (15sec break).
- Analysis: liquid-liquid extraction; LC-MS/MS system.

RESULTS

The analyte levels by samples are equivalent. No difference involving the both homogenizers is detectable (See Figure 1).

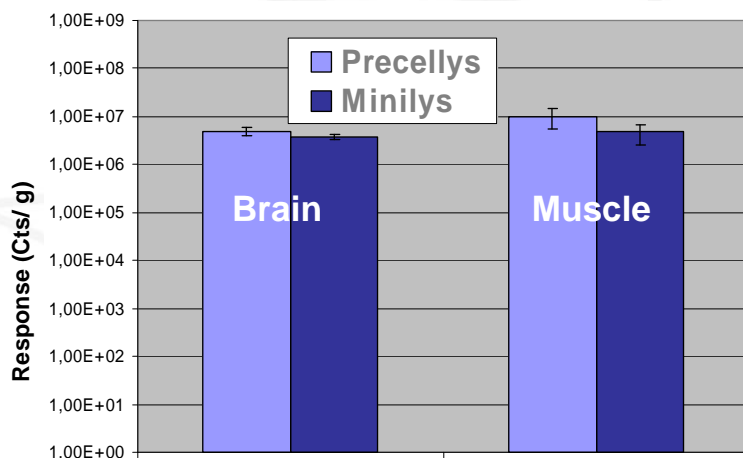
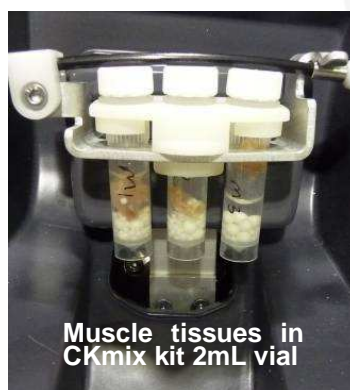
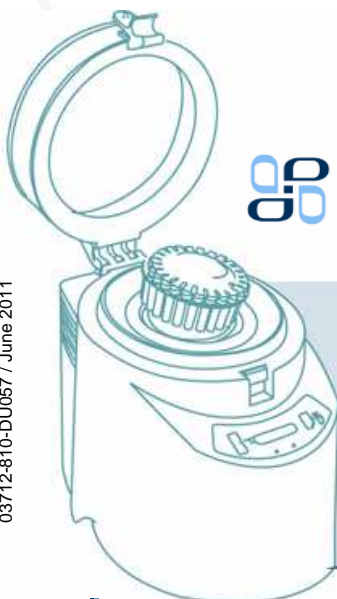


Figure 1: LC-MS/MS analysis from Precellys and Minilys sample.



CONCLUSION

Precellys and Minilys are suitable and reliable systems to extract Drug from soft tissues for DM&PK testing with a fast process, cross-contamination free, high reproducibility and comparable drug levels extracted.

Minilys homogenizer is a real alternative for standardization of the sample preparation for laboratories with a low or medium throughput of sample.

For more details, please contact precellys@bertin.fr