



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.

/ MATERIALS

- 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).

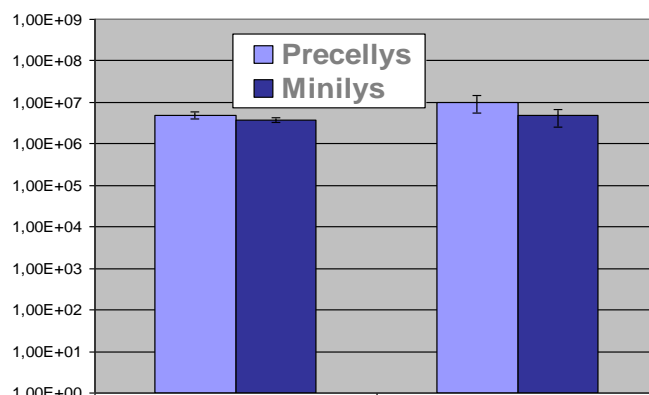


Figure 1: LC-MS/MS analysis from Precellys and Minilys sample.



/ 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.