

DIUTHAME MS imaging of a mouse brain

MALDI-MSI (mass spectrometry imaging) is expected to be a powerful analytical tool for the biomedical and life science fields. However, matrix application on the sample's surface—the essential procedure in MALDI-MSI—depends on dedicated matrix-coating equipment or on an individual's experience and skill. In addition, matrix-derived peaks appearing in the low m/z region hamper low mass analysis. This paper reports the MSI results of applying DIUTHAME, instead of a matrix, on a frozen mouse brain tissue section.

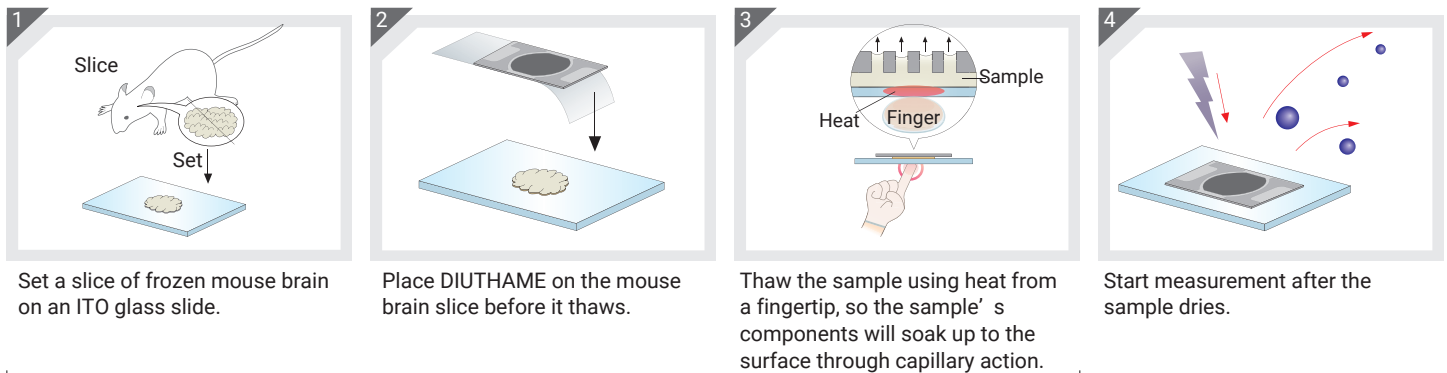


▲ Left: A13331-18-2
Right: A13331-5019-1

Measurement conditions

Measurement mode: Laser pitch 50 μm
 Reflectron, positive & negative ion mode
 Sample: Mouse brain slice, 20 μm thick

Method

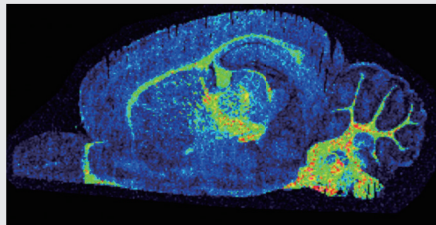


Perform these steps in a cryostat.

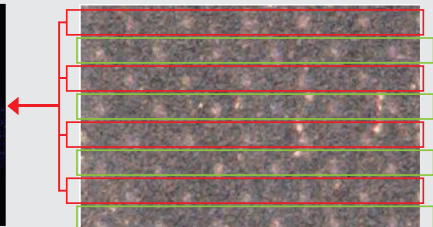
Results

The DIUTHAME-MSI results are shown below. Frozen tissue sections can be analyzed by MSI by simply mounting DIUTHAME onto a frozen sample and then letting the sample thaw.

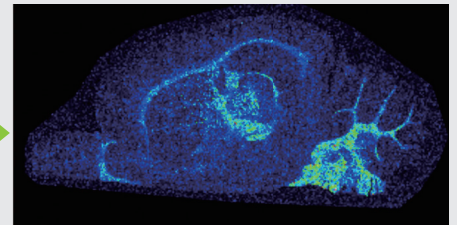
m/z 848.6 [PC(38:4)+K]⁺



Laser irradiation marks on the DIUTHAME



m/z 890.7 [ST(d18:1/C24:0)-H]⁻

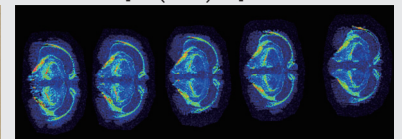


The right figures show the DIUTHAME-MSI results of successive tissue sections of a mouse brain using DIUTHAME A13331-5019-1. These show that DIUTHAME-MSI requires no technical skills or dedicated sample preparation apparatus, making DIUTHAME extremely easy to use.

Optical image



m/z 848.6 [PC(38:4)+K]⁺



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