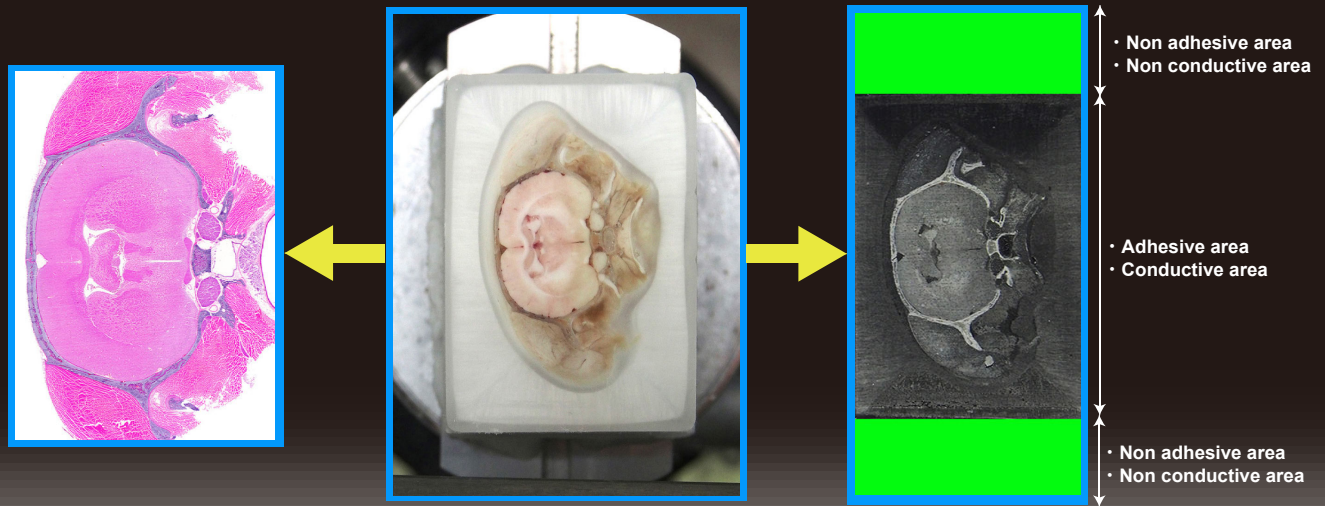


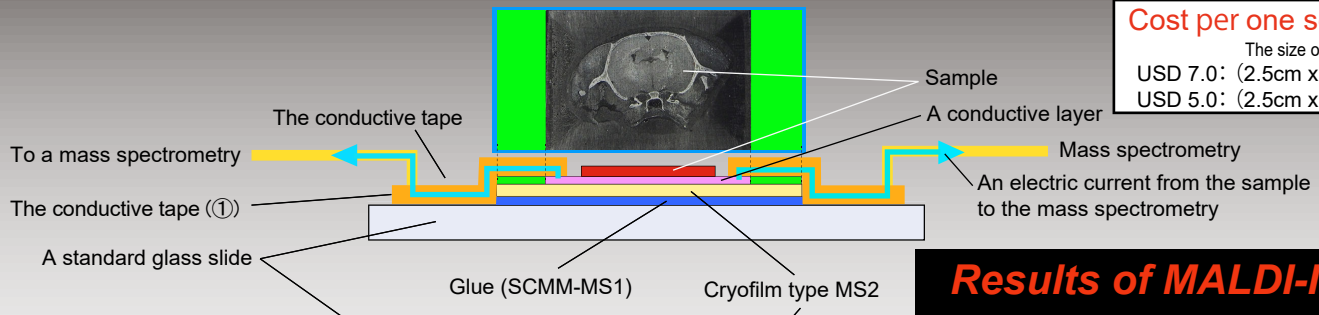
# Application for MALDI-MSI

## Advantages of Kawamoto's film method on the MALDI-IMS

- 1) The method produces almost perfect frozen sections from soft tissues, hard tissues, plants, and insects et al.
- 2) The signals are stronger than that from an ITO glass slide, a standard glass slide and a nonconductive tape.
- 3) The method can be used for different types of study (histology, histochemistry, immuno-histochemistry, in-situ hybridization, gene analysis using LMD technique, Proteomics, Transcriptomics).
- 4) Signals derived from the embedding medium(SCEM) are not detected in the tissue areas.



**Cost per one section**  
 The size of section  
 USD 7.0: (2.5cm x 2.0cm)  
 USD 5.0: (2.5cm x 1.5cm)



### Sample preparation

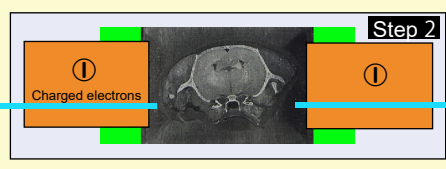
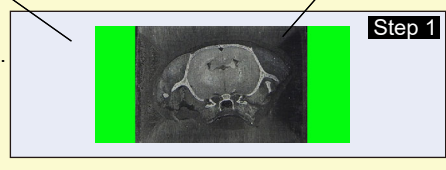
1) Fix the Cryofilm type MS2 on the standard glass slide with a mounting medium(SCMM-MS1). (the SCMM is polymerized with a UV light.)

The SCMM-MS1 ensures to make a flat surface of Cryofilm on the glass slide.

2) Place the conductive adhesive tape(Ⓛ) on the Cryofilm and glass slide as shown in the step 2. (The tape Ⓛ is made with a copper foil.)

Mass spectrometry

The charged electrons on the sample are released to the mass spectrometry via the copper tape Ⓛ.



### Materials used in this method

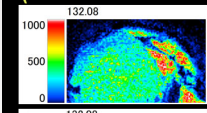
- Embedding medium: SCEM
- Blade: SL-T30UF
- Adhesive film: Cryofilm type MS2 (for the MALDI-IMS)
- Adhesive film: Cryofilm type 4D(16UF) (for histological applications)
- Glue for fixing the Cryofilm to the glass slide: SCMM-MS1

### Recommendation

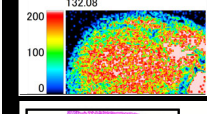
The starter kit is very useful for introducing Kawamoto's film method. The kit contains a video and all of the tools used for the method.

## Results of MALDI-IMS

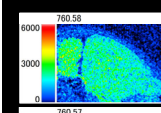
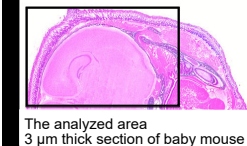
(These results were made with seiral sections)



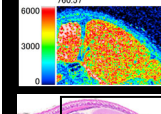
on a ITO glass slide



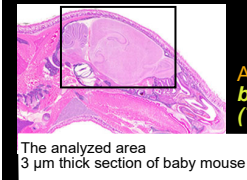
on the Cryofilm type MS2 (a conductive type)



on the Cryofilm type 2C(9) (a non-conductive type)



on the Cryofilm type MS2 (a conductive type)



Analytical Chemistry, 2019  
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