DIU THAME®
APPLICATION NOTE

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MS imaging of a frozen fried chicken using blotting method

The blotting method using DIUTHAME is a pretreatment method that enables MS imaging measurement without thin-sectioning the sample. In this paper, the blotting method was applied to analyze the change over time of a frozen fried chicken. The frozen section was regarded as representing the conditions immediately after cooking, and the component distributions in the frozen fried chicken immediately after cooking and after defrosting were compared.

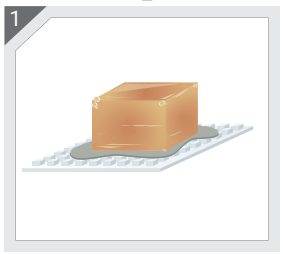
▲ A13331-18-2B (For blotting)

Measurement conditions

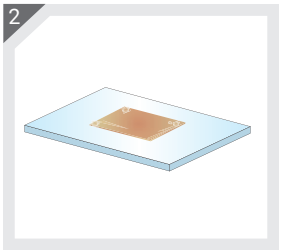
Measurement mode: Laser pitch 80 µm, positive ion, reflectron mode
Sample: Frozen fried chicken

Method

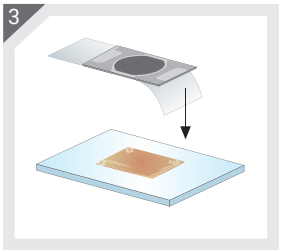
Frozen sample



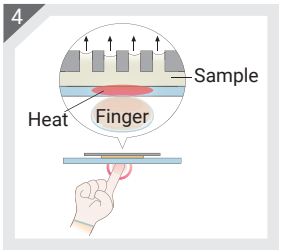
1 Fix a frozen fried chicken on the stage.



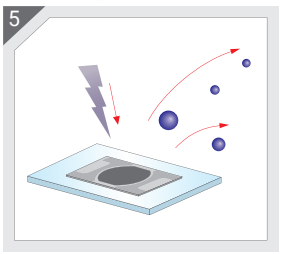
2 Slice the sample by cryostat and put it on a glass plate.



3 Place the DIUTHAME on the frozen section.

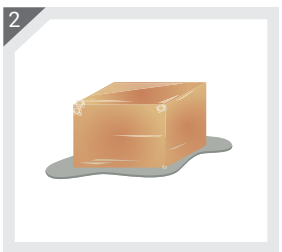


4 Thaw the section using heat from a fingertip.

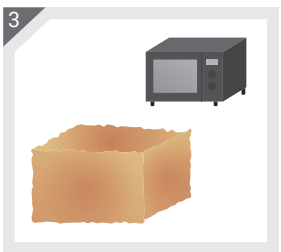


5 Start measurement after the sample dries.

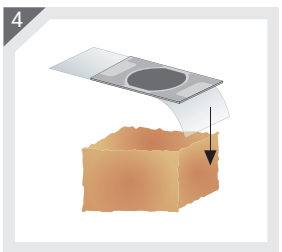
Defrosted sample



2 Remove the sample from the stage.



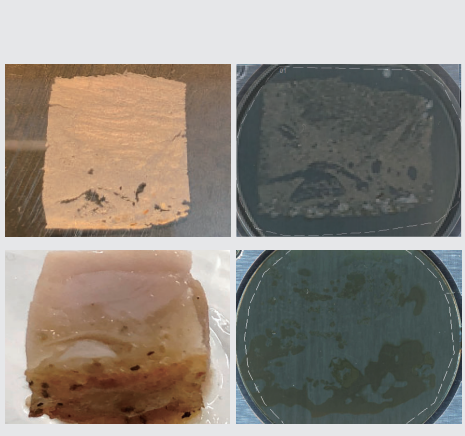
3 Defrost the sample in a microwave.



4 Place the DIUTHAME on the sample for blotting.

Results

These results show that many components were transferred from the fried outer part to the inner meat by defrosting the frozen fried chicken. These results suggest that the change over time of a sample could be measured by the blotting method using DIUTHAME.



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