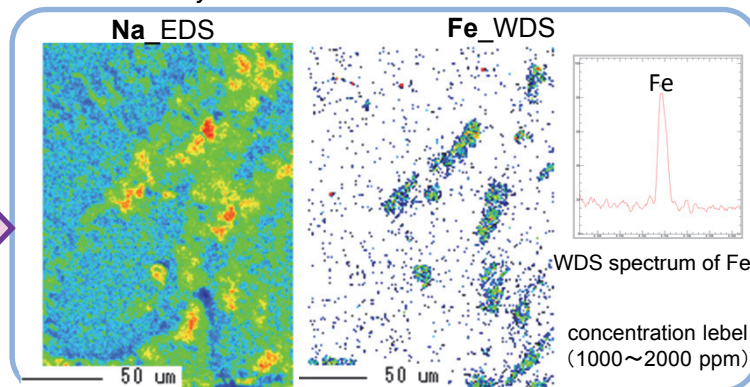
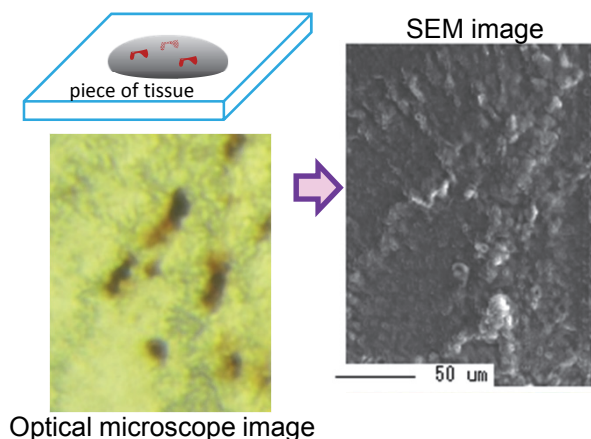


Electron Microscopic Analysis for Life-Science Materials

Electron microscopy is quite useful for analysis of morphologies, composition distributions, and chemical states of life-science materials. In this poster, we introduce the result of SEM and TEM analysis of blood, sun block cream, lactobacillus, and hair.

EPMA analysis of body tissue

<Analysis of small blood marks in tissue>

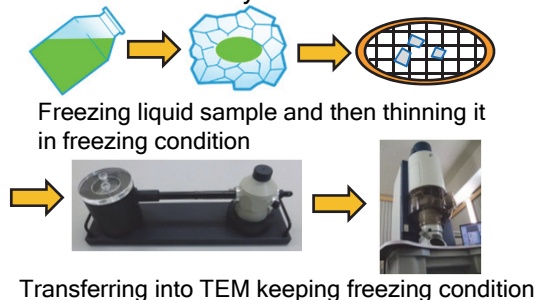


Simultaneous measurement (WDS/EDS)
(main component: EDX, minor component: WDX)
A small amount of Fe derived from the small blood marks is detected.

The sample is provided by Dr. Oka in Saiseikai Shiga Hospital

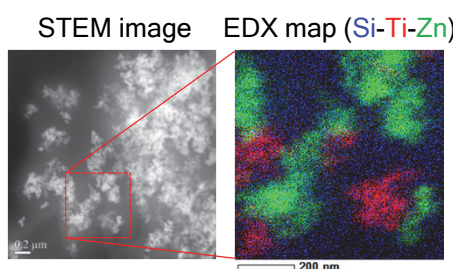
Cryo transfer TEM technique

<Procedure of cryo transfer>



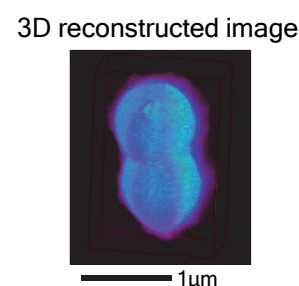
TEM observations of liquid samples become possible by keeping freezing condition from the preparation to the observation.

<Observation of sun block cream>



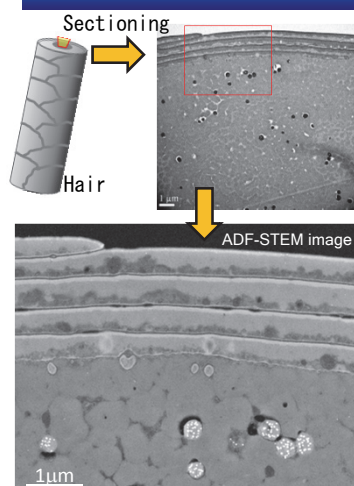
Ti-oxide and Zr-oxide particles are observed in silicone oil.

<Observation of lactobacillus>

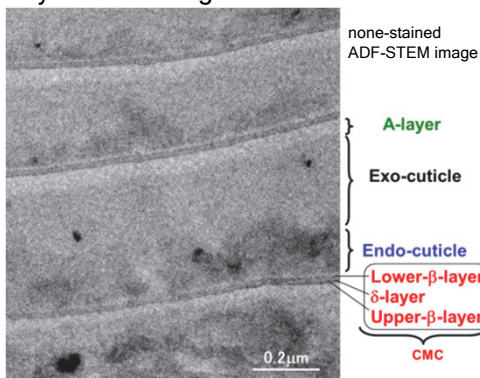


Three-dimensional morphology of lactobacillus in moisture state is observed.

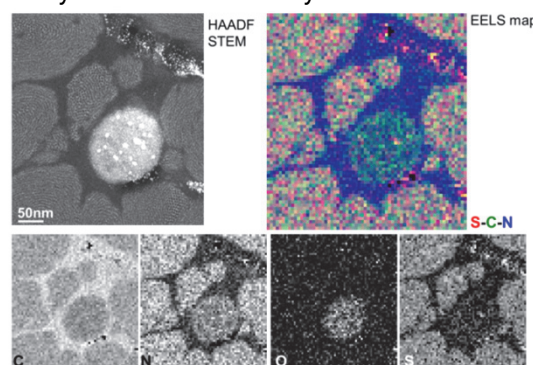
Cryo transfer TEM observations of hair



Cryo-STEM image of cuticle



Cryo-STEM-EELS analysis of cortex



Morphologies, compositions, and chemical states inside hair can be analyzed without electron staining.