

### 3. Growth of Interface-floated Lysozyme Crystals (Video: 9)

#### <Explanation>

Here, the specimen is viewed sideways after the growth of crystals cannot be seen any more, under the condition where the magnetic force is made equal to the intensity of the gravity in the vessel center and lysozyme crystals are deposited on the bottom and in the gas-liquid interface. The video shows the scene speeded up 10-times.

Particulates floating in the liquid can be confirmed by observation. These particulates are fine crystals of lysozyme. This phenomenon can be seen during the experiments under the condition of pseudo-zero gravity where the magnetic force is made equal to the intensity of the gravity in the vessel center. It is possible for these particulates not to come in contact with either the gas-liquid interface or the vessel bottom, allowing them to keep floating in the liquid since the stage of generation of their kernels. Once the specimen is taken out of the magnet, all the particulates settle down onto the bottom of the vessel. Such a behavior cannot be observed again even if the specimen is returned to the magnet.

#### <Place of execution>

National Institute of Advanced Industrial Science and Technology, Kansai

#### <Presentation>

S. Maki,

"Circulating fine particles in quasi-weightless solution; a technique to realize a containerless protein crystallization with a magnetic force",

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