The Cryogenic Service Room is one of the common facilities in the Institute of Industrial Science and supplies liquid helium (-269 °C), liquid nitrogen (-196 °C), nitrogen gas (0.7 MPa) and primary pure water to the laboratories. Since helium is a scarce and expensive resource, we supply liquid helium through a recycling method in which evaporated helium gas is collected and re-liquefied.

Main Equipment

● Helium liquefier (LINDE - L140)
● Liquid helium storage tank (2,500L)
● Long helium gas cylinders (2,085 m³)
● Compressor for helium gas recovery (50 m³/h)
● Liquid nitrogen storage tank (11,000L)
● Automatic Liquid Nitrogen Supply System
● Primary pure water production unit (2.2 m³/h)

Main Activities

・ Production and supply of liquid helium
・ Liquid nitrogen supply
・ Nitrogen gas supply
・ Supply of primary pure water
・ Maintenance and management of each facility
・ Accounting for the use of special fluids
・ Compliance with the High Pressure Gas Safety Act
・ High Pressure Gas Safety Guidance