

CIMS-Nabtesco Bio Lab (MEB 134&135)

One of the goals in our current projects is to design a set of actuators based on shape memory alloys (SMAs), and we are evaluating the SMAs by cytotoxicity testing to elucidate their biocompatibility for use in biomedical application in the CIMS-Nabtesco Bio Lab which was designed and arranged as a biosafety level-2 laboratory. Major equipment is listed below. They are indispensable in order to perform cell culture and bio imaging in sterile condition.

- Biological safety cabinet (class II, type A)...Cellgard NU-477-500 (NuAire)
- CO2 incubator.....Autoflow NU-4850 (NuAire)
- High speed refrigerated centrifuges.....Centrifuge 5810R, 5424R (Eppendorf)
- Water purification system.....Purelab Option Q15 (Elga)
- Autoclave.....Sterilizer SQ500C (Yamato)
- Oven.....Heratherm OGS180 (Thermo Scientific)
- Biomedical freezer.....MDF-U5312 (Panasonic)
- Ultra low temperature freezer.....HEF U570 (Eppendorf)
- Cryopreservation system.....BioCane 34 (Thermo Scientific)
- Absorbance microplate and cuvette reader...SPECTROstar Nano (BMG Labtech)
- Phase contrast microscope.....DMi1 (Leica Microsystems)
- Confocal laser scanning microscope.....TCS SP8 (Leica Microsystems)



Figure. Area for cell culture in MEB 134 (left) and the confocal microscope in MEB 135 (right).

MTT assay, colony forming assay and microscopic observation are the key methods to see whether cell viability and proliferation are affected by co-culture with our SMAs.

Contacts:

Minoru TAYA, Director
Center for Intelligent Materials and Systems
Department of Mechanical Engineering
Phone: 206-685-2850
E-mail: tayam@uw.edu

Satomi TAKAO, Acting Instructor
Center for Intelligent Materials and Systems
Department of Mechanical Engineering
Phone: 206-543-4775 (Office), 206-543-3412 (Lab)
E-mail: stakao@uw.edu