

Cell/Tissue Culture Facility

Facility Equipment & Consumables

Biosafety Cabinet

- **Biosafety Cabinet Microzone BK-2-4:** Class II, Type A2 Biological Safety Cabinets. Two units are installed in DV3092F level 1 facility and equipped with integral UV lights and external aspirators. The negative pressure and two HEPA filters featured in the chamber (99.99% efficient for all particles $\geq 0.3\mu\text{m}$) provide protections to users, products and environment.
- **Biosafety Cabinet Nu-540-600:** 6ft model. It is located in DV1074D level 2 facility equipped with manufacturer-installed UV light, external aspirator and pipette aide. It is a Class II, Type A2 biological safety cabinet providing protections to users, cultures and environment.
- **Biological Cabinet Thermo Fisher 1300 series A2:** Class II safety cabinet, Type A2, 4ft model. Three units are installed in level 2 facility DV1074D and equipped with manufacturer installed- UV light and external aspirator and pipette aid. The combined negative pressure and HEPA filters protect users, products and environment.

Centrifuge

- **Beckman Allegra X-14R:** Located in DV1074D. It is the bench top centrifuge with refrigerator. Operating temperature -10°C to $+40^{\circ}\text{C}$; Swing bucket rotor SX4750 for 15ml, 50ml, 250ml tubes and multi-well plates. 25T and 75T flask adaptors are available. Safety caps are available for spinning biohazard.
- **Eppendorf Centrifuge 5810R:** Located in DV3092K sharing with DV3092F level 1 facility. It is the bench top centrifuge with refrigerator. Operating temperature range -9°C to 40°C ; 4x750ml swing bucket rotor along with different adapters for 15ml, 50 ml, 250ml tubes and multi-well plates. Maximum speed 3900 rpm (3214 x g). Rotor A-2-DWP for deep well plates is compatible with this model.

CO2 Incubator

- **NuAire Nu-5800:** Two units are installed in DV1074D level 2 facility. The Incubator has been designed to provide a reliable controlled in-vitro environment for optimum tissue cell culture growth. The chamber also provides an environment for the storage and preservation of embryos, gametes and animal tissue cell cultures intended for research at or near body temperature. Chamber temperature range: 5°C to 55°C (5°C above ambient to 30°C Max. ambient); chamber temperature uniformity: $\pm 0.35^{\circ}\text{C}$ @ 37°C; temperature Recovery 0.12°C/minute average. CO2 Range 0.1 to 20% (0.0 Set Point Idles System), CO2 accuracy $\pm 0.1\%$, CO2 recovery up to 5%-0.50% / +0.20% in 5 minutes average. A relative humidity level of up to 90% is achieved in the Incubator by the use of a stainless steel pan filled with distilled water no purer than 1 mega ohm, and placed on the bottom of the chamber.
- **Thermo Fisher Steri- Cycle 370:** Two units are in DV3092F level 1 facility and 4 units are in DV1074D level 2 facility. One unit in DV3092F is equipped with an inner shaker for suspension culture. These reliable- direct-heat incubators feature an in-chamber HEPA air filtration system that continuously filters the entire chamber volume every 60 seconds and maintains cleanroom-like air-quality conditions within five minutes following a routine door opening. Additionally, an on-demand 140°C high-temperature sterilization cycle eliminates contamination from all internal surfaces simplifying cleaning procedures. Chamber temperature range +5°C above ambient to 50°C, uniformity $\pm 0.3^{\circ}\text{C}$ @ +37°C. A relative humidity level of up to 95 % at 37°C is achieved by natural water vaporization from a humidity pan. CO2 range 0 to 20%, CO2 Inlet pressure 15 psig (1 bar) ± 5 psig (0.3 bar), CO2 display 0.1% increments.

Fridge

- **GE Refrigerator L18JZTRW-1VL17JYPRW-1:** Located in DV3092K sharing with DV3092F level 1 facility. 4°C full size refrigerator with a top freezer chamber at -20°C.
- **GE Refrigerator VL17JYPRW-1:** Located in DVDV1074D. 4°C full size refrigerator with a top freezer chamber at -20°C.
- **VWR Scientific SCRFC-20A;** Located in DV1082. 4°C full size refrigerator with a top freezer chamber at -20°C.

Liquid Nitrogen Tank

- **Locator 4 Thermo Fisher CY509108:** located in DV1074D. For sample storage, 121L capacity with 4 sample locators and a level monitor. 10 cryo-storage box places /locator, 81 cryo-tube places/box. Cryo-storage sample boxes are available.
- **Liquid Nitrogen Transfer Tank Thermo Fisher TY509X2:** For liquid nitrogen transfer, 10L capacity.

Microscope

- **Amscope XYL403:** One unit is in DV3092F, two in DV1074D. Inverted fluorescence microscope with 10x and 20x objectives; three channels are available: bright field, yellow green at excitation 420-490nm and red at excitation 500-550nm.
- **Carl Zeiss Axiovert 100:** Located in DV1074D. Bright field inverted microscope for observing cell morphology and counting cells. 10x and 20x dry objectives are available.
- **Nikon ECLIPSE TS 100:** Located in DV3092F. Bright field inverted microscope for observing cell morphology and counting cells. 10x and 20x dry objectives are available.
- **Nikon ECLIPSE TS2-FL:** Located in DV1074D. Inverted fluorescence microscope equipped with camera and tablet computer for imaging. Photos can be transferred by USB drives. Three available channels: bright field, green at excitation 488nm and red at 560nm. Dry objectives of 4x, 10x and 40x are available.

Others and Consumables

- Cryo- Freezing Container Nalgene 5100-0001: available for both room DV1074 and 3092F. For 1-2 ml cryogenic tubes, 18 spaces/box. Cooling reagent isopropanol is required.
- Glass Hemocytometer VWR Scientific 15170-208: for training use only.
- Water Baths
- Basic consumables for sterilization such as paper towels, kimwipe, 95%/70% ethanol, concentrated bleach , bio-hazard bags and clear autoclave bags for CL1 room.