



Flow Cytometry Core Facility

**Safe Operating Procedures for the LSR11**

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**I. Purpose**

The purpose of this safe operating procedure is to define the methods of proper and safe usage of the equipment in the Flow Cytometry Core Facility. The procedures listed are meant to supplement OMRF's Chemical Hygiene Plan and the Biosafety Manual. All procedures listed are meant to ensure the safety of all users, allow correct usage of equipment and to prevent cross contamination. SOPs will be available in the facility and online.

**II. General Facility Information**

The Flow Cytometry Core Facility is located on the 4<sup>th</sup> floor in the Chapman Building in room E402. Regular business hours are between 8:30 am to 5:00 pm, Monday thru Friday. After hour usage is permitted for trained users whose badge has been activated with the badge scanner. The door must remain shut at all times. Signage listing the Bio Safety level, emergency contact and Laser Radiation Warning must remain at the main entrance. The laboratory is approved at Biosafety Level 2 (BLS-2). Staining procedures, which do not require washing steps (i.e. live/dead staining), may be completed in the Clean Bench hood. Gloves are required for operating the LSR11. Lab Coats are required for users with BSL-2 samples. PPE (gloves) will be available for all users. No food or beverage will be allowed in the laboratory. All gloves will be removed and discarded before leaving the facility.

**III. Facility Orientation and Training**

Facility staff will provide orientation and training for the LSR11. New users are required to undergo training on the LSR11. Exposure procedures and emergency response are discussed during training. Exemption from instrument training is given to users who sign up for assistance with analysis.

**IV. Startup Procedure**

1. Turn on the LSR11 by pushing the green button on the right side of the machine.
2. Turn on the computer
3. Check the fluid levels of the sheath and waste tank. The waste should be emptied when it is full or when the alarm goes off. The sheath is filled in the morning and should last all day, but can be checked by rocking it or depressurizing the tank and looking inside. The sheath is filled to the top weld line with the PBS located next to the sink.
4. Purge air from the filter connected to the sheath tank.
5. Perform two Primes to remove air from the flow cell.
6. Start FacsDiva and make a new experiment.

**V. Shutdown Procedure**

1. Run 10% bleach on high for 10 minutes and DI water on high for 10 minutes.
2. Turn machine to Standby.
3. Check the calendar for other users and modify time if done early.
4. If you are the last user then turn off both machine and computer.
5. Discard all tubes, tips and filters etc. into the biohazard container and wipe down area with 70% Ethanol.
6. All users and staff will wash and sanitize hands before leaving the laboratory.

**VI. Spill Procedures**

Flow cytometer surfaces are wiped with 10% bleach, left on surface for 5 minutes and then rinsed with water. Large spills on flow cytometer surfaces are cleaned with 10% bleach and left on surface for 20 minutes with a soaked wet towel. We require all users to follow guidelines in our spill protocol when working in core facility. 10% bleach solution and gloves are provided and should be disposed of in a biohazard container after cleaning a spill.

**VII. Operator Training & Experience**

All users are required to take a training course with the personnel of the core facility. This training will orientate the users to the facility and learn how to safely use the flow cytometry equipment. A copy of the safe operating procedures will be provided with copies available on-line. Training will include proper startup, shutdown procedures, instrument operation, safety procedures, spill management and decontamination.

**VIII. Exposure to Biohazardous Material (Emergency Guide)**

In the event of an exposure to biohazardous materials, the following steps have to be taken: attend to the exposure or wound with first aid. If the injury is severe, call 911 or, if during working hours, call HR at 271-7430 and HR will coordinate non-emergency medical treatment. For injuries or exposures after hours, proceed to the nearest emergency room and contact HR the next working day. If a work related illness or injury occurs after hours, seek medical treatment at St. Anthony Hospital ER, 100 N Lee, Oklahoma City, OK 73101 (272-6152) or OU Medical Center, 700 NE 13<sup>th</sup> Street, Oklahoma City, OK 74104 (271-4064). The affected employee should also complete an Incident Report or Sharps Incident Report when able and submit it to the Safety Office.

**Emergency Numbers**

Safety Office	271-7266
600-8784 cell	
Oklahoma Poison Control Center	1-800-522-4611