Johns Hopkins University - Integrated Imaging Center
Homewood Flow Cytometry Resource

Flow Cytometry Biosafety and Sample Information Form

The Homewood Flow Cytometry Resource (HFCR) is equipped to accommodate samples containing BSL1, BSL2, and BSL2+ agents. The safety of the staff and users of the facility must be taken into consideration, especially when handling and sorting unfixed samples containing unscreened human or nonhuman primate cells, known infectious agents (≥ ABSA Risk Group 2), or recombinant or synthetic nucleic acid molecules or vectors. In order to assess and effectively reduce the risk of exposure to biohazardous droplets and aerosols generated during cell sorting, it is critical to gather information about the biological specimens being handled. As a precaution, all unfixed human/non-human primate specimens and primary human cell cultures are *a priori* considered biohazardous.

Please complete and submit this form to the HFCR in order to schedule your instrument use.

INVESTIGATOR INFORMATION

Investigator Name: _____
Laboratory (Principal Investigator): _____
Laboratory Location (Building, Room): _____
Department: _____
Phone Number: _____
Email Address: _____

Have you completed blood-borne pathogens training? ☐ YES ☐ NO
If YES, provide date of completion: _____

Have you reviewed the 2014 ISAC Cell Sorter Biosafety Standards? ☐ YES ☐ NO

What is your level of flow cytometry experience?
_____ ☐ hours ☐ years

Which flow cytometers have you used in the past?

BIOSAFETY INFORMATION

Biosafety Level: ☐ BSL1 ☐ BSL2 ☐ BSL2+

List type of sample and source (e.g., mouse spleen cells, human peripheral blood mononuclear cells). For cell lines, please describe cell origin:

Do the samples contain known infectious agents? ☐ YES ☐ NO

If applicable, list agents and biosafety level classification:

Have (potential) infectious agents been inactivated? ☐ YES ☐ NO

How?

Do the samples contain recombinant or synthetic nucleic acids? ☐ YES ☐ NO

If applicable, specify recombinant virus and expressed gene product:

Does the modification result in expression of a toxin or oncogene (specify)? ☐ YES ☐ NO

If cells were transduced with lentiviral gene transfer vector, specify generation:

Have the cells been tested for mycoplasma/viral infection? ☐ YES ☐ NO

Date of last test(s) and results:

Has the experiment and/or biosafety level been reviewed and approved by the Institutional Biosafety Committee? ☐ YES ☐ NO

If applicable, please provide date of approval, approval number, biosafety level, and any other pertinent information regarding the review:

Are the samples fixed? ☐ YES ☐ NO

If YES, provide fixation method, including concentration and exposure time:

EXPERIMENT INFORMATION

Flow Cytometer:

☐ Becton Dickinson FACSCalibur (Analyzer)
488 nm laser: 530/30 BP, 585/42 BP, 670 LP
635 nm laser: 661/16 BP
Rate: $5/15min

☐ Becton Dickinson FACSCanto (Analyzer)
488 nm laser: 530/30 BP, 585/42 BP, 670 LP/735 SP, 780/60 BP
633 nm laser: 660/20 BP, 780/60 BP
Rate: $5/15min

☐ Sony Biotechnology SH800 (Cell Sorter: 2-way)
405 nm, 488 nm, and 638 nm lasers (combined/co-linear)
450/50 BP, 525/50 BP, 600/60 BP, 665/30 BP, 720/60 BP, 785/60 BP
Additional filters: 585/30 BP, 600 LP, 617/30 BP
Rate: $40, $10/15min after first hour

☐ Sony Biotechnology SY3200 (Cell Sorter: 4-way)
488 nm laser: 525/50 BP, 615/30 BP, 695/50 BP
561 nm laser: 585/40 BP, 615/30 BP, 695/50 BP, 775/50 BP
642 nm laser: 665/30 BP, 720/40 BP, 775/50 BP
Rate: $10/15min

Experiment Title(s):

Please provide a detailed description of your experiment and its objective(s):

Number of Samples: _____

Cell Count per Sample: _____ Concentration: _____ cells/mL

Fluorochromes/Antibodies/Fluorescent Proteins/Dyes:

Controls:

☐ Unstained
☐ Single-stained (compensation – cells or beads)
☐ "Fluorescence-Minus-One" (FMO)
☐ Viability
☐ Isotype (for intracellular staining)

CELL SORTING INFORMATION

Cell Diameter: _____ µm

Nozzle size (it is recommended that the nozzle orifice be four to six times larger than the cell diameter):
☐ 70 µm ☐ 100 µm ☐ 130 µm

Population(s) to be sorted:
1. _____
2. _____
3. _____
4. _____

Sample collection vessel: _____

Collection Media: _____

Number of cells desired: ☐ All of sample ☐ Specific number: _____

Lowest frequency to be sorted (% of total cells): _____

Signature: _____ Date: _____

Principal Investigator Signature: _____ Date: _____

If you have any questions, please contact Hanhvy Bui at hbui9@jhu.edu.
For more information on biosafety, please visit http://isac-net.org/Resources-for-Cytometrists/Biosafety.aspx