\*\*\* Note shaded areas for use by the URMC Flow Cytometry Shared Resource lab only

OPERATOR INTIALS:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

USER NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FILE NAME:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Scheduling:**

* Contact the Core directly via [email](mailto:matthew_cochran@urmc.rochester.edu,%20meghann_obrien@urmc.rochester.edu,%20terry_wightman@urmc.rochester.edu?subject=CyTOF%20Scheduling) to schedule time. You can review the [PPMS calendar](https://ppms.us/urmc/schedules/?pf=2) for availability but open time is not guaranteed to be available.
  + An estimate of time needed **MUST** be determined prior to scheduling.
* Time will be added to the calendar by the staff as a “Pending” reservation.
* Fill out and [submit](mailto:matthew_cochran@urmc.rochester.edu,%20meghann_obrien@urmc.rochester.edu,%20terry_wightman@urmc.rochester.edu?subject=CyTOF%20Scheduling) the “Helios Acquisition Form” **completely** and the reservation will be confirmed on the calendar.
  + Forms not received 24 hours prior to a run may result in cancellation or postponement of the run.
  + Helios samples are stable for extended periods of time (at least 2 weeks) in IR staining buffer which allows significant flexibility in scheduling.
* Additional time can potentially be added after a reservation has been confirmed if instrument and staff time are available.

**Cancellation:**

* Reservations must be cancelled via [email](mailto:matthew_cochran@urmc.rochester.edu,%20meghann_obrien@urmc.rochester.edu,%20terry_wightman@urmc.rochester.edu?subject=CyTOF%20Scheduling) 48 hours in advance of the scheduled appointment to avoid being charged for the time.
* Cancellations inside 48 hours will be charged at full price unless another user fills that time.

**Estimating time:**

* The Helios can analyze ~2x10^6 particles per hour with continuous running using the super sampler.
* The washing between samples is ~10 minutes, so two samples of 1 million cells (very little debris) would take a little more than an hour to acquire on average.
  + Keep in mind that the Helios will see debris (platelets, RBC, cell fragments) as events and that can impact run times.

**Sample Acquisition:**

* Samples will be acquired in the order that they are listed below.
  + Priority samples should be listed first, and indicated as such, if there are special requirements when running those samples.
* The run time will be split evenly between the samples unless otherwise requested below.
* If a certain number of cells acquired is sufficient please indicate that in the notes below.
* Additional comments can be recorded at the end of the form if needed.

**Sample Information**

**Submitted by:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **#** | **Specimen ID** | **Cell Type** | **Cell #** | **Notes** | **Volume (uL)** | **Initials/**  **Run date** | **Norm** |
| 00 | Example sample name | Hu PBMC | ~2 million | Please record 500k |  |  |  |
| 01 |  |  |  |  |  |  |  |
| 02 |  |  |  |  |  |  |  |
| 03 |  |  |  |  |  |  |  |
| 04 |  |  |  |  |  |  |  |
| 05 |  |  |  |  |  |  |  |
| 06 |  |  |  |  |  |  |  |
| 07 |  |  |  |  |  |  |  |
| 08 |  |  |  |  |  |  |  |
| 09 |  |  |  |  |  |  |  |
| 10 |  |  |  |  |  |  |  |
| 11 |  |  |  |  |  |  |  |
| 12 |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |
| 14 |  |  |  |  |  |  |  |
| 15 |  |  |  |  |  |  |  |
| 16 |  |  |  |  |  |  |  |
| 17 |  |  |  |  |  |  |  |
| 18 |  |  |  |  |  |  |  |
| 19 |  |  |  |  |  |  |  |
| 20 |  |  |  |  |  |  |  |

**Panel information:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tag** | **Target** |  | **Tag** | **Target** |
| Y89 |  |  | Sm152 |  |
| Pd102 |  |  | Eu153 |  |
| Rh103 |  |  | Sm154 |  |
| Pd104 |  |  | Gd155 |  |
| Pd105 |  |  | Gd156 |  |
| Pd106 |  |  | Gd158 |  |
| Cd106 |  |  | Tb159 |  |
| Pd108 |  |  | Gd160 |  |
| Pd110 |  |  | Dy161 |  |
| Cd110 |  |  | Dy162 |  |
| Cd111 |  |  | Dy163 |  |
| Cd112 |  |  | Dy164 |  |
| Cd113 |  |  | Ho165 |  |
| Cd114 |  |  | Er166 |  |
| Cd116 |  |  | Er167 |  |
| Sn120 |  |  | Er168 |  |
| I127 |  |  | Tm169 |  |
| Xe131 | Background |  | Er170 |  |
| Cs133 | Background |  | Yb171 |  |
| Ba138 | Background |  | Yb172 |  |
| La138 |  |  | Yb173 |  |
| La139 |  |  | Yb174 |  |
| Ce140 | Normalization beads |  | Lu175 |  |
| Pr141 |  |  | Lu176 |  |
| Ce142 |  |  | Yb176 |  |
| Nd142 |  |  | BCKG190 | Background noise |
| Nd143 |  |  | Ir191 | Intercalator |
| Nd144 |  |  | Ir193 | Intercalator |
| Nd145 |  |  | Pt194 |  |
| Nd146 |  |  | Pt195 |  |
| Sm147 |  |  | Pt196 |  |
| Nd148 |  |  | Pt198 |  |
| Sm149 |  |  | Pb208 |  |
| Nd150 |  |  | Bi209 |  |
| Eu151 |  |  |  |  |

**QC information:**

|  |  |
| --- | --- |
| **Test** | **Result** |
| Nebulizer lot number |  |
| Plasma Start Time |  |
| PSI (consistent over time) |  |
| X (consistent over time) |  |
| Y(consistent over time) |  |
| Dual slope (all around.03 Y or N) |  |
| Tb Mean Dual (>400K for Tb) |  |
| Resolution (≥400) |  |
| Oxide ratio (<0.03) |  |
| RSD (<3% for analytes in Tuning) |  |
| Detector Voltage (<-1200) |  |
| EQ bead Singlets prior to run |  |
| EQ bead Doublets prior to run |  |
| EQ bead during (in case of issues) |  |
| EQ bead after run (in case of issues) |  |

**Comments: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**