STEM CELL LABORATORY (STCL)

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BD FACSCanto II Maintenance

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FLOW-GEN-041
BD FACSCanto II Maintenance

1 PURPOSE

1.1 The purpose of this procedure is to explain the requirements for maintaining the BD FACSCanto II flow cytometer. A guideline for the daily, weekly, and monthly maintenance, as well as the manufacturer preventive maintenance schedule is explained in this procedure.

2 INTRODUCTION

2.1 In order to ensure optimal performance the BD FACSCanto II flow cytometer, it is necessary to perform routine cleaning and maintenance measures. These measures are detailed in chapter 10 of the FACSCanto II Instructions for Use according to daily, weekly, monthly, and service contract preventive maintenance requirements.

3 SCOPE AND RESPONSIBILITIES

3.1 This procedure is to be performed as specified to ensure proper maintenance of the STCL BD FACSCanto II flow cytometer. The Stem Cell Laboratory Medical Director, Laboratory Manager, and flow cytometry personnel are responsible for ensuring the requirements of this procedure are successfully met.

4 DEFINITIONS/ACRONYMS

4.1 BD-Becton Dickinson

4.2 SIT-Sample injection tube

4.3 PPE-Personal protective equipment

5 MATERIALS

5.1 12x75mm test tubes, BD Falcon™

5.2 BD FACSflow ™

5.3 Bleach, Clorox

5.4 BD FACS Clean

5.5 BD Shutdown Solution

6 EQUIPMENT

6.1 BD FACSCanto II ™ Flow Cytometer with loader option, Becton Dickinson

7 SAFETY

7.1 Always wear appropriate PPE when performing these maintenance steps and use the protective shields provided at waste sink.

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8 PROCEDURE

8.1 Scheduled maintenance:

8.1.1 Daily:

8.1.1.1 Empty the waste tank (if needed) at the waste sink and add 500 mls of Clorox bleach. *This may be done at the end of work day or before startup.*

8.1.1.2 Wet a gauze pad with DI water and wipe the area around the SIT and aspirator arm to remove salt build up.

8.1.1.3 Prior to instrument startup empty the condensation trap on the fluidics cart (if needed). *This may be done at the end of work day or before startup.*

8.1.1.4 Perform instrument startup by referring to JA1.

8.1.1.5 Fluidics startup replaces the BD FACS shutdown solution with BD FACSFlow solution.

8.1.1.6 Prior to instrument shutdown, place a carousel onto the loader.

8.1.1.7 Put about 2 mls of 10% bleach solution into a tube and place it into the 1st slot on the carousel and put about 2.5 mls of DI water into a 2nd tube and place that tube in slot 2.

8.1.1.8 Launch the FACSDiva software program and wait until it connects with the instrument (about 20 seconds).

8.1.1.9 Click on the Carousel menu heading and scroll to clean.

8.1.1.10 Observe the list of tubes 1-3 and change the time for tubes 1 and 2 tube so that each will run for 5 minutes. (No 3rd rinse tube is required.)

8.1.1.11 Click ok and allow the clean cycle to complete.

8.1.1.12 Fluidics Shutdown (may be performed from FACSDiva software Cytometer menu after the clean cycle is completed). This replaces the BD FACSFlow solution with BD Shutdown solution.

8.1.2 Weekly maintenance (or as needed):

8.1.2.1 Purge fluid filters.

8.1.3 Monthly maintenance:

8.1.3.1 Decontaminate fluidics using the Long Clean from the Cytometer menu of FACSDiva or FACSCanto software. This cleans the fluid lines using BD FACS Clean solution.

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8.1.4 Biannual or annual depending on the service contract stipulation:

8.1.4.1 Instrument service engineer performs preventive maintenance, including part replacement as needed, and instrument function checks to optimize performance.

8.2 Record by check mark the pertinent daily/monthly maintenance performance on the maintenance log at the cytometer.

8.3 Record troubleshooting measures and corrective actions on the troubleshooting log at the cytometer.

9 RELATED DOCUMENTS/FORMS

9.1 FLOW-FORM-011 BD FACSCanto II Maintenance Log

9.2 STCL-FORM-019 Trouble Shooting Log

9.3 FLOW-GEN-041 JA1 FACSCanto II Instrument Startup

10 REFERENCES

10.1 BD FACSCanto™ II Instructions for Use, 643089 Rev. A 7/07

11 REVISION HISTORY

Revision No.	Author	Description of Change(s)
05	M. Reese	Corrected SOP titles in section 9

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