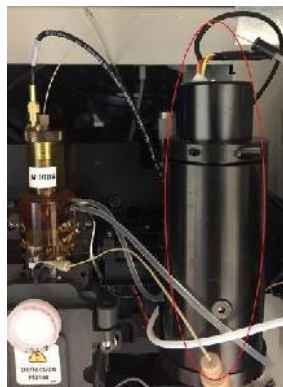


FACSria FSC PMT Option

1. Preface

FACSrias can be fitted with a dual FSC detection system (photodiode [PD] + photomultiplier tube [PMT]) known as the FSC PMT option. It has the theoretical ability to detect 0.2µm particles from noise.

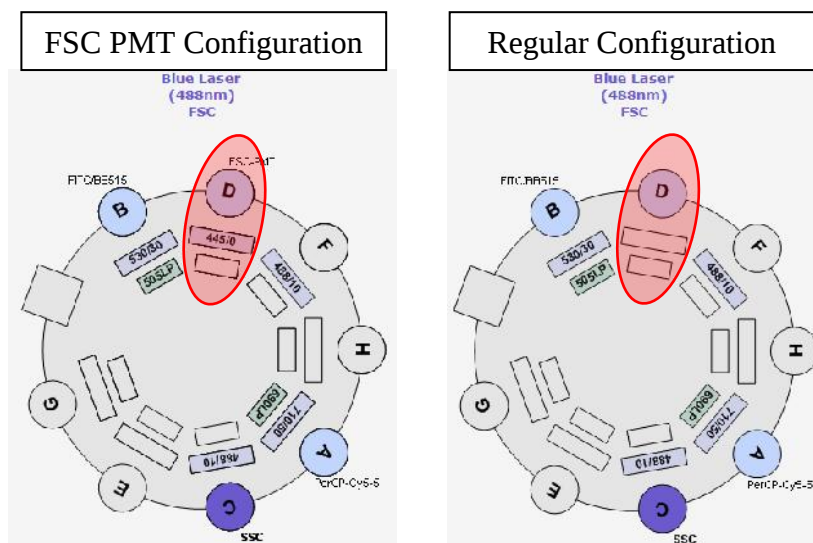


The FSC PMT is mounted to the right of the flow cell (here circled in red).

When this option is installed, a special CS&T configuration is created in the FACSDiva software. That configuration has a blue octagon array with the "FSC PMT" parameter in the detector D position.



However, the instrument is physically fitted with a trigon array as can be seen to the left. The aforementioned octagon is used to trick FACSDiva into recognizing the FSC PMT.



By default, the FACSDiva software treats the FSC PMT as a fluorescent parameter causing CS&T to fail or pass with warnings. To bypass this issue when performing CS&T, a duplicate regular configuration is created with the "FSC PMT" parameter deleted from the D detector.

WORK-FLOW

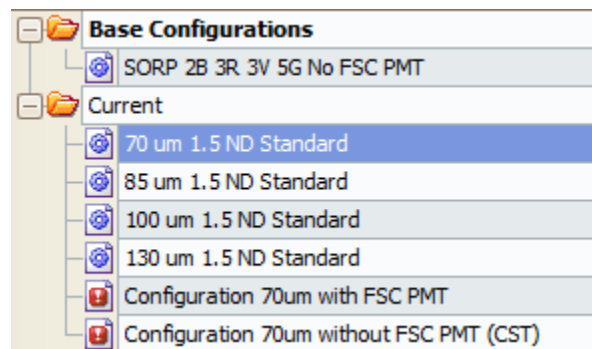
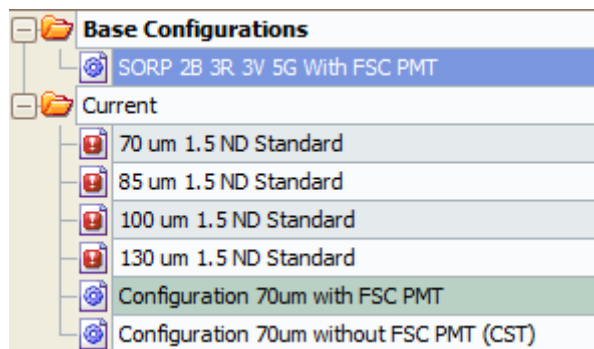
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2. Setup (configuration naming will differ between instruments)

Depending on your installation you may need to log in the FACSDiva software as BDService (password = superman) to unlock configurations (see example below). In certain cases, the FSC configuration will be directly accessible from the Administrator account with no unlocking needed.

- Click Cytometer and select View Configurations.
- Set the base configuration to "SORP 2B 3R 3V 5G With FSC PMT" by right-clicking it. This action unlocks the current configurations ("Configuration 70um with FCS PMT" and "Configuration 70um without FSC PMT (CST)") associated with that base configuration and makes them visible under the Administrator account (see example below).
- Log out and log in as Administrator.
- Select the "Configuration 70um without FSC PMT (CST)" configuration to perform CS&T.
- Select the "Configuration 70um with FCS PMT" configuration to use the FSC PMT.
- To return to the normal mode, reset the base configuration to "SORP 2B 3R 3V 5G No FSC PMT" using the BDService account. This unlocks the configurations (in this example, 70, 85, 100, and 130um) associated with that base configuration.

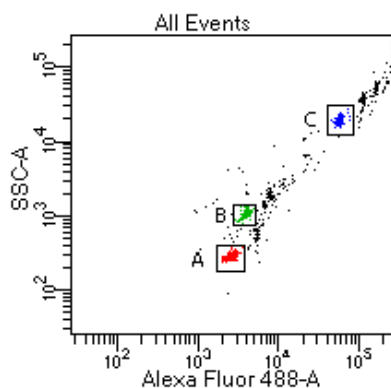
Configurations associations (notice the blue and red icons) under the Administrator account:



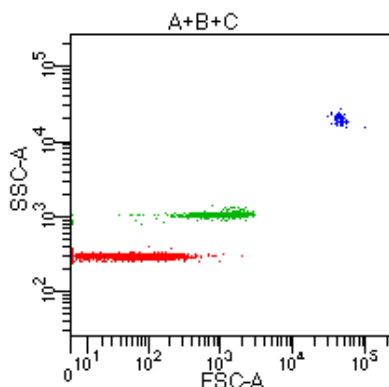
3. Results

BioCytex Megamix beads: **A** = 0.5 μ m | **B** = 0.9 μ m | **C** = 3 μ m

AF488 Threshold = 1,000



FSC (PD) = 378V



FCS (PMT) = 480V

