**3. Instrument Details**

**3.1. Instrument Manufacturer**

BD Biosciences

http://www.bdbiosciences.com/home/

**3.2. Instrument Model**

BD SORP FACSAria I Flow Cytometer.

Serial number: P46900029

Manufactured: 9/2006

Pre-shipment QC: 9/25/2006

**3.3. Instrument Configuration and Settings**

**3.3.1. Flow Cell and Fluidics**

The instrument has not been altered. It has a fixed-alignment cuvette flow cell

**3.3.2. Light Sources**

The instrument has been altered. It is a four-laser Special Order Research Product with ACDU option. The 561-nm laser was added in November 2012. The lasers were repositioned to the following pinhole placements.

Pinhole 1: 561-nm Coherent Sapphire solid state; 50mW

Pinhole 2: 355-nm Lightwave Xcyte solid state; 20mW

Pinhole 3: 633-nm Coherent Cube, 25mW

Pinhole 4: 488-nm Coherent Sapphire solid state; 100mW

**3.3.3. Excitation Optics Configuration**

The instrument has been upgraded to include an octagon for the yellow laser detection having five active PMTs, the Blue laser detector array was reduced to four active PMTs plus SSC, the UV trigon was increased to three active PMTS.

**3.3.4. Optics Filter**

The instrument can accept optical configuration changes. Refer to the attached configurations found below.

**3.3.5. Optical Detectors**

Baseline voltages are provided in the configuration tables.

**3.3.6. Optical Paths**

Optical filters are removable.

The following tables provide optical configurations used after the Yellow Laser install in Nov 2012.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Configuration Name: 561-70um\_70psi\_2we | | | | | | |
| Laser | Detector Position | PMT Name | Dicroic Mirror | BP Filter | Installation Date | Baseline Voltage 4-Dec-12 |
| Yellow | A | YG 780/60 | 750LP | 780/60 | Nov-12 | 673 |
| Yellow | B | YG 710/50 | 685LP | 710/50 | Nov-12 | 510 |
| Yellow | C | YG 670/30 | 635LP | 670/30 | Nov-12 | 539 |
| Yellow | D | YG 610/20 | 595LP | 610/20 | Nov-12 | 482 |
| Yellow | E | YG 582/15 | none | 582/15 | Nov-12 | 501 |
| UV | A | UV 675LP | 630LP | 675+ | Sep-06 | 504 |
| UV | B | UV 530/30 | 505LP | 530/30 | Sep-06 | 586 |
| UV | C | UV 450/50 | none | 450/50 | Sep-06 | 354 |
| Red | A | R 780/60 | 755LP | 780/60 | Sep-06 | 563 |
| Red | B | R 710/50 | 685LP | 710/50 | Sep-06 | 533 |
| Red | C | R 660/20 | none | 660/20 | Sep-06 | 505 |
| Blue | A | B 670/14 | 655LP | 670/14 | Sep-06 | 566 |
| Blue | B | B 610/20 | 600LP | 610/20 | Sep-06 | 380 |
| Blue | C | B 550/30 | 535LP | 550/30 | Sep-06 | 432 |
| Blue | D | B 510/20 | 505LP | 510/20 | Sep-06 | 446 |
| Blue | E | SSC | none | 488/10 | Sep-06 | 287 |
| Blue | FSC | FSC (Diode) | none | 488/10 | Sep-06 | 236 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Configuration Name: 561-100um\_20psi\_4we | | | | | | |
| Laser | Detector Position | PMT Name | Dicroic Mirror | BP Filter | Installation Date | Baseline Voltage 2-Dec-12 |
| Yellow | A | YG 780/60 | 750LP | 780/60 | Nov-12 | 688 |
| Yellow | B | YG 710/50 | 685LP | 710/50 | Nov-12 | 527 |
| Yellow | C | YG 670/30 | 635LP | 670/30 | Nov-12 | 545 |
| Yellow | D | YG 610/20 | 595LP | 610/20 | Nov-12 | 495 |
| Yellow | E | YG 582/15 | none | 582/15 | Nov-12 | 508 |
| UV | A | UV 675LP | 630LP | 675+ | Sep-06 | 520 |
| UV | B | UV 530/30 | 505LP | 530/30 | Sep-06 | 597 |
| UV | C | UV 450/50 | none | 450/50 | Sep-06 | 365 |
| Red | A | R 780/60 | 755LP | 780/60 | Sep-06 | 560 |
| Red | B | R 710/50 | 685LP | 710/50 | Sep-06 | 551 |
| Red | C | R 660/20 | none | 660/20 | Sep-06 | 519 |
| Blue | A | B 670/14 | 655LP | 670/14 | Sep-06 | 581 |
| Blue | B | B 610/20 | 600LP | 610/20 | Sep-06 | 391 |
| Blue | C | B 550/30 | 535LP | 550/30 | Sep-06 | 440 |
| Blue | D | B 510/20 | 505LP | 510/20 | Sep-06 | 452 |
| Blue | E | SSC | none | 488/10 | Sep-06 | 281 |
| Blue | FSC | FSC (Diode) | none | 488/10 | Sep-06 | 221 |

The following tables provide various optical configurations that have been used PRIOR to the Yellow laser install in Nov 2012

\*Many fluorochrome names are currently in this configuration.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Configuration Name: “100 of Aria Party Mix” (20PSI, 100um, 4.00 WE) | | | | | | |
| Laser | Detector Position | PMT Name | Dicroic Mirror | BP Filter | Installation Date | Baseline Voltage 01Feb2011 |
| Blue | FSC | FSC (Diode) | None | 488/10 | 9/2006 | 392V |
| Blue | A | FL5\* | 735LP | 780/60 | 9/2006 | 544V |
| Blue | B | FL4\* | 685LP | 710/50 | 9/2006 | 457V |
| Blue | C | FL3\* | 600LP | 610/20 | 9/2006 | 501V |
| Blue | D | FL2\* | 550LP | 575/26 | 9/2006 | 342V |
| Blue | E | FL1\* | 505LP | 530/30 | 9/2006 | 354V |
| Blue | F | SSC | none | 488/10 | 9/2006 | 278V |
| Blue | G | Not available |  |  |  |  |
| Blue | H | Not available |  |  |  |  |
| Red | A | FL8\* | 755LP | 780/60 | 9/2006 | 478V |
| Red | B | FL7\* | 685LP | 710/50 | 9/2006 | 468V |
| Red | C | FL6\* | none | 660/20 | 9/2006 | 467V |
| UV | A | FL10\* | 635LP | 675LP | 9/2006 | 391V |
| UV | B | FL9\* | none | 450/50 | 9/2006 | 393V |
| UV | C | Not available |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Configuration Name: “Aria Ultimate Mix” (70PSI, 70um, 2.00 WE) | | | | | | |
| Laser | Detector Position | PMT Name | Dicroic Mirror | BP Filter | Installation Date | Baseline Voltage 08Oct2010 |
| Blue | FSC | FSC (Diode) | None | 488/10 | 9/2006 | 389V |
| Blue | A | FL5\* | 735LP | 780/60 | 9/2006 | 525V |
| Blue | B | FL4\* | 685LP | 710/50 | 9/2006 | 442V |
| Blue | C | FL3\* | 600LP | 610/20 | 9/2006 | 483V |
| Blue | D | FL2\* | 550LP | 575/26 | 9/2006 | 332V |
| Blue | E | FL1\* | 505LP | 530/30 | 9/2006 | 336V |
| Blue | F | SSC | none | 488/10 | 9/2006 | 278V |
| Blue | G | Not available |  |  |  |  |
| Blue | H | Not available |  |  |  |  |
| Red | A | FL8\* | 755LP | 780/60 | 9/2006 | 455V |
| Red | B | FL7\* | 685LP | 710/50 | 9/2006 | 452V |
| Red | C | FL6\* | none | 660/20 | 9/2006 | 452V |
| UV | A | FL10\* | 630LP | 675LP | 9/2006 | 398V |
| UV | B | FL9\* | none | 450/50 | 9/2006 | 396V |
| UV | C | Not available |  |  |  |  |

\*Many fluorochrome names are currently in this configuration.

**3.4. Other Relevant Instrument Details**

* BD FACSAria User’s Guide: PN# 333608
* BD FACSDiva Software Reference Manual: PN# 642213