

# Instruments

## BD Arial II (4 Lasers) - Sorter

BD FACS Aria II SORP Sorter				
Laser	Wavelength	Filters (Bandpass)	Dichroic Mirrors (SP/LP)	Parameter(Eg)
UV	355nm	740/35	690LP	BUV737
		450/50	410LP	DAPI
		379/28	N.A	Indo-1(Violet)
Violet	405nm	780/60	750LP	BV786
		710/50	690LP	BV711
		660/20	630LP	BV650
		610/20	595LP	BV605
		525/50	505LP	BV510
		450/40	N.A	CFP
		710/50	685LP	PE-Cy5.5
Blue	488nm	545/35	525LP	YFP
		530/30	505LP	GFP
		488/10	N.A	SSC
		780/60	755LP	PE-Cy7
Yellow-Green	561nm	660/20	635LP	PE-Cy5
		610/20	600LP	mCherry
		585/15	N.A	PE
		780/60	755LP	APC-Cy7
Red	640nm	670/30	N.A	APC

## BD FACSSymphony X50 - Analyzer

LASER	WAVELENGTH (nm)	POWER (mW)	DETECTOR	CHANNEL	MIRROR	FILTER	PARAMETER	FLUOROCHROME CHOICES
UV	355	60	A	29	785 LP	800/60 BP	UV 1	BUV805
			B	30	755 LP	780/60 BP	UV 2	
			C	31	740 LP	750/30 BP	UV 3	
			D	32	690 LP	730/50 BP	UV 4	BUV737
			E	33	650 LP	670/50 BP	UV 5	BUV661
			F	34	605 LP	615/25 BP	UV 6	BUV615-P
			G	35	570 LP	585/30 BP	UV 7	BUV563
			H	36	530 LP	530/50 BP	UV 8	
			I	37	495 LP	510/40 BP	UV 9	
			J	38	455 LP	465/29 BP	UV 10	BUV496
			K	39	410 LP	442/43 BP	UV 11	DAPI, Hoechst33258, FVS440UV
			L	40	370 LP	379/34 BP	UV 12	BUV395
Violet	405	250	A	17	785 LP	800/60 BP	Violet 1	
			B	18	755 LP	780/60 BP	Violet 2	BV786, BV785
			C	19	740 LP	750/30 BP	Violet 3	BV750
			D	20	690 LP	710/50 BP	Violet 4	BV711
			E	21	650 LP	670/50 BP	Violet 5	BV650
			F	22	605 LP	615/25 BP	Violet 6	BV605
			G	23	590 LP	595/33 BP	Violet 7	
			H	24	570 LP	585/30 BP	Violet 8	BV570, Pacific Orange
			I	25	525 LP	530/50 BP	Violet 9	
			J	26	495 LP	510/30 BP	Violet 10	BV510, BV500, FV5510, Amcyan
			K	27	455 LP	465/29 BP	Violet 11	BV480
			L	28	410 LP	442/43 BP	Violet 12	BV421, Pacific Blue, FV5450
Blue	488	400	A	1	785 LP	800/60 BP	Blue 1	
			B	2	750 LP	770/40 BP	Blue 2	BB790-P
			C	3	690 LP	710/50 BP	Blue 3	BB755-P
			D	4	670 LP	680/30 BP	Blue 4	BB700-P
			E	5	650 LP	660/30 BP	Blue 5	BB660-P
			F	6	590 LP	610/30 BP	Blue 6	BB630
			G	7	570 LP	585/30 BP	Blue 7	
			H	8	525 LP	530/50 BP	Blue 8	BB515, FITC, FV5520, GFP, EGFP, Sytox Green
			I	9	495 LP	510/30 BP	Blue 9	BB515
			J	10	488/10 BP	488/10 BP	SSC	SSC
YG	532	200	A	41	800 LP	800/60 BP	Green 1	
			B	42	735 LP	780/60 BP	Green 2	BYG790-P, PE-Cy7
			C	43	715 LP	750/40 BP	Green 3	
			D	44	695 LP	725/20 BP	Green 4	
			E	45	670 LP	700/40 BP	Green 5	
			F	46	650 LP	680/30 BP	Green 6	PE-Cy5.5
			G	47	590 LP	660/30 BP	Green 7	
			H	48	570 LP	610/30 BP	Green 8	PE-CF594, PE-Texas Red, mCherry, FV5620, Alexa 568, Alexa 594
			I	49	525 LP	580/20 BP	Green 9	PE, mOrange, RFP, Alexa 532
Red	628	200	A	11	805 LP	820/30 BP	Red 1	
			B	12	760 LP	780/60 BP	Red 2	APC-Cy7
			C	13	740 LP	750/60 BP	Red 3	
			D	14	695 LP	710/50 BP	Red 4	Alexa Fluor 700, APC-R700, FV5700, Alexa 680, (Alexa 660)
			E	15	670 LP	680/30 BP	Red 5	Alexa 660
			F	16	650 LP	660/30 BP	Red 6	APC, Alexa 633, Alexa 633

# BD FACSSymphony X50 Spillover Matrix

IMCB A5.2 Spillover Spreading Error Spread Matrix  
 Stain Index based on CD4 SK3 clone. Spread values should be interpreted in the context of brightness

Fluorochrome	Stain Index	BB615	FITC	BB630	BB660	PerCP	BB700	BB735	BB790	PE	BYG684	PECF5	PECF5	PE-Cy7	APC	AF700	APC-R7	APC-Cy7	BUV395	BUV496	BUV563	BUV619	BUV661	BUV733	BUV803	BUV421	BUV480	BUV510	BUV570	BUV625	BUV630	BUV711	BUV750	BUV786			
1	BB615	571	-	4.6	0.5	0.5	0.4	0.6	0.3	0.0	0.6	0.5	0.3	0.3	0.0	0.3	0.4	0.0	0.0	0.2	0.4	0.0	0.3	0.3	0.0	0.0	0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0			
2	FITC	48	5.8	-	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
3	BB630	271	1.8	1.8	-	3.6	3.8	4.5	2.1	1.0	0.8	1.1	4.6	2.4	0.7	2.4	4.0	4.4	0.3	0.3	0.4	0.5	4.6	1.9	0.5	0.3	0.5	0.3	0.4	0.4	4.8	1.1	1.0	1.1	0.7		
4	BB660	337	1.1	1.0	1.3	-	4.0	4.7	2.5	1.2	0.0	0.0	1.3	2.6	0.7	4.2	9.4	10.4	0.6	0.4	0.0	0.4	7.0	0.7	0.4	0.5	0.0	0.2	0.2	0.7	5.3	1.1	1.3	0.8			
5	PerCP-Cy55	72	0.0	0.0	0.0	1.0	-	4.4	2.7	1.7	0.0	0.0	0.0	2.0	1.3	1.2	7.1	7.6	0.5	0.0	0.0	0.5	2.3	1.2	0.8	0.0	0.0	0.0	0.0	0.6	0.9	1.7	1.6	1.3			
6	BB700	708	0.9	0.8	0.7	1.0	3.5	-	2.6	1.4	0.2	0.0	0.5	1.8	0.7	1.5	8.6	9.3	0.6	0.4	0.0	0.0	4.6	1.9	0.4	0.4	0.0	0.0	0.1	0.5	1.7	3.1	1.5	1.1			
7	BB735	258	0.9	0.8	0.3	0.7	1.9	1.9	-	2.3	0.0	0.0	0.0	0.6	1.2	0.5	4.1	4.1	0.3	0.4	0.0	0.3	0.5	1.9	0.8	0.3	0.0	0.0	0.5	0.3	1.0	3.3	1.8				
8	BB790	350	0.8	0.4	0.3	0.4	1.4	1.0	4.4	-	0.0	0.3	0.3	0.5	1.3	0.4	3.0	3.0	0.3	0.4	0.0	0.0	0.3	0.4	0.9	2.1	0.4	0.0	0.2	0.0	0.2	0.6	1.8	5.0			
9	PE	363	2.0	2.2	1.7	1.4	2.4	2.6	1.1	0.6	-	8.7	3.2	1.5	0.4	0.8	1.6	1.2	0.0	1.1	0.0	1.8	1.0	1.0	0.0	0.0	0.8	0.4	1.0	1.3	1.3	0.6	0.3	0.4	0.0		
10	BYG584	576	0.5	0.6	1.3	0.9	2.3	2.1	0.4	0.4	0.8	-	3.0	1.4	0.5	0.5	1.2	1.2	0.0	0.2	0.0	0.6	0.5	0.6	0.0	0.0	0.2	0.2	0.2	0.8	0.7	0.5	0.4	0.2	0.0		
11	PE-CF594	384	0.9	1.0	2.2	2.1	3.8	3.6	1.7	1.0	0.4	1.1	-	2.3	0.8	1.5	3.0	3.4	0.2	0.2	0.0	0.3	1.9	1.3	0.3	0.2	0.2	0.2	0.3	2.0	0.7	0.6	0.7	0.4	0.0		
12	PE-Cy6	500	1.4	1.5	1.3	3.4	5.8	6.6	2.5	1.6	0.0	0.4	1.0	-	1.2	3.2	9.1	8.1	0.4	0.3	0.0	0.3	4.9	0.6	0.3	0.4	0.0	0.0	0.2	0.9	2.3	1.0	1.1	0.6	0.0		
13	PE-Cy7	395	0.6	0.5	0.0	0.4	1.7	1.5	5.3	6.0	0.0	0.2	0.4	0.5	-	0.2	3.4	3.3	0.4	0.4	0.0	0.0	0.2	0.4	0.7	1.3	0.2	0.0	0.0	0.2	0.2	0.3	1.7	3.0	0.0		
14	APC	484	0.0	0.0	0.3	0.6	2.1	1.8	0.0	0.5	0.0	0.0	0.0	1.0	0.4	-	7.9	8.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.7	0.6	0.0	0.0		
15	AF700	173	0.0	0.0	0.0	0.0	1.7	1.9	0.0	0.6	0.0	0.0	0.0	0.6	0.6	0.5	-	7.1	0.6	0.0	0.0	0.0	0.0	0.0	0.8	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.5		
16	APC-R700	783	0.0	0.0	0.0	0.3	2.6	2.5	0.5	0.6	0.0	0.0	0.0	0.6	0.7	0.8	7.3	-	0.7	0.2	0.0	0.0	0.2	1.4	1.3	0.4	0.0	0.0	0.0	0.2	0.3	1.0	0.9	0.6	0.0		
17	APC-Cy7	120	0.0	0.0	0.0	0.0	1.2	0.8	0.9	1.4	0.0	0.0	0.0	0.0	0.0	1.3	0.8	8.3	8.4	-	0.0	0.0	0.0	0.0	0.0	0.8	1.9	0.0	0.0	0.0	0.0	0.8	0.9	2.2	0.0		
18	BUV395	230	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	BUV496	67	1.4	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	-	0.6	1.1	1.0	0.0	0.0	0.0	0.8	0.5	0.0	0.0	0.0	0.0	0.0	
20	BUV563	124	2.3	2.1	1.2	0.7	2.0	1.9	0.0	0.0	0.7	6.0	3.4	1.4	0.6	0.9	1.9	1.8	0.0	0.9	0.0	-	1.8	1.9	0.4	0.4	0.0	0.0	0.4	0.4	0.7	0.0	0.4	0.5	0.0	0.0	
21	BUV615	272	0.7	0.5	1.6	1.3	2.7	2.3	0.5	0.5	0.0	1.0	5.1	1.4	0.6	1.5	4.5	4.7	0.0	0.5	0.0	0.6	-	3.1	1.1	0.4	0.0	0.0	0.2	1.2	0.6	0.9	0.9	0.3	0.0		
22	BUV661	316	0.5	0.0	0.3	0.6	2.2	1.8	0.4	0.3	0.0	0.0	0.3	0.9	0.4	3.2	9.6	9.4	0.6	0.3	0.0	0.0	0.4	-	1.3	0.5	0.0	0.0	0.0	0.2	0.9	1.1	1.1	0.5	0.0		
23	BUV737	256	0.7	0.5	0.0	0.0	1.3	1.1	2.2	1.2	0.0	0.0	0.0	0.4	0.5	0.7	8.4	9.6	0.6	0.5	0.0	0.0	0.2	1.1	-	1.2	0.0	0.0	0.0	0.3	0.7	1.8	2.2	0.9	0.0		
24	BUV805	190	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.6	1.2	0.4	0.7	0.0	0.0	0.4	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
25	BUV421	504	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.9	0.5	0.3	0.2	0.0	0.0	-	0.4	0.4	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	
26	BUV480	130	1.8	1.3	0.9	0.6	0.0	0.0	0.0	0.0	0.0	0.9	1.0	0.0	0.0	0.5	1.0	0.0	0.0	1.8	4.3	0.8	0.9	0.9	0.0	0.0	0.4	-	1.6	1.1	1.3	0.5	0.0	0.0	0.0	0.0	
27	BUV510	43	1.6	0.1	2.2	1.2	0.0	0.0	0.0	0.0	0.0	2.7	2.4	0.0	0.0	1.5	2.7	0.0	0.0	2.8	3.5	2.4	2.2	2.7	0.0	0.0	0.0	0.9	-	1.3	2.0	1.5	1.0	1.2	0.0	0.0	
28	BUV570	55	1.8	1.4	2.1	1.4	2.4	1.8	0.0	0.0	0.8	2.1	3.3	1.0	0.0	1.2	2.1	0.0	0.0	0.7	0.0	2.2	2.0	1.7	0.0	0.0	1.0	0.0	0.7	-	1.9	1.2	1.2	0.9	0.0	0.0	
29	BUV605	146	1.0	1.1	2.3	1.6	3.0	2.8	0.5	0.8	0.4	1.5	3.4	1.6	0.7	1.5	3.4	3.4	0.0	0.6	0.0	1.4	3.8	2.8	1.2	0.6	0.4	0.0	0.4	0.7	-	1.5	1.4	1.6	1.3	0.0	
30	BUV650	136	0.7	0.0	1.0	0.8	2.1	1.8	0.0	0.0	0.0	0.0	1.1	1.1	0.4	2.4	7.8	8.8	0.6	0.4	0.0	0.0	1.2	7.1	1.3	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31	BUV711	241	0.9	0.6	0.4	0.0	1.7	1.9	1.3	0.8	0.0	0.0	0.0	0.4	0.4	2.4	6.2	7.1	0.6	0.6	0.0	0.0	0.3	4.7	5.3	1.2	0.3	0.0	0.0	0.3	1.0	-	3.1	2.2	0.0	0.0	
32	BUV750	271	0.8	0.7	0.0	0.0	0.9	0.4	1.5	0.9	0.0	0.0	0.0	0.0	0.4	0.3	4.4	5.2	0.4	0.4	0.0	0.0	0.2	1.0	4.6	1.3	0.2	0.0	0.0	0.4	0.7	1.8	-	2.6	0.0	0.0	
33	BUV786	171	0.5	0.0	0.0	0.0	0.0	0.0	1.1	1.0	0.0	0.0	0.0	0.0	0.7	0.0	3.6	3.8	0.5	0.7	0.0	0.0	0.0	0.4	1.9	3.6	0.3	0.0	0.0	0.3	0.3	1.0	2.6	-	0.0		

## BD LSR II (4 Lasers) - Analyzer

### Violet

405	450/50	BV421 Pacific Blue
505LP	525/50	BV510, Pacific Orange
600LP	610/20	BV605
630LP	660/20	BV655
690LP	710/50	BV711, Odot 711
750LP	780/60	BV786

### Blue

488	488/10	SSC
	530/30	FITC, AF488
	695/40	PerCP
550LP	575/26	PE-CY7
735LP	780/60	PE

### Red

640	660/20	APC, AF647
	780/60	APC-Cy7, APC-H7

### UV

355	730/45	BUV737
	450/50	DAPI
	379/28	BUV395

Cytek Aurora (3 Lasers) - Analyzer

Supported Fluorochromes			
Laser (nm)	Primary Detector	Fluorochrome	Emission Max (nm)
488	B2	BD Horizon™ BB515	515
		<b>Alexa Fluor® 488</b>	520
	B3	FITC	520
		<b>Alexa Fluor® 532</b>	550
	B5	<b>PE</b>	576
		BD Horizon™ PE-CF594	610
	B6	<b>PE/Dazzle™ 594</b>	610
		PE-eFluor® 610	610
		PE-Texas Red®	625
		PE-Alexa Fluor® 610	630
		<b>PE-Cy™5</b>	668
	B8	PE-Cy™5.5	680
		PerCP	680
		<b>PerCP-Cy™5.5</b>	680
B9	BD Horizon™ BB700	695	
	PE-Alexa Fluor® 700	720	
B10	<b>PerCP-eFluor® 710</b>	730	
	<b>PE-Cy™7</b>	780	
640	R2	<b>APC</b>	660
		eFluor® 660	660
	R4	Alexa Fluor® 647	668
		APC-Cy™5.5	680
	R5	BD Horizon™ APC-R700	705
		<b>Alexa Fluor® 700</b>	720
	R8	<b>APC/Fire™ 750</b>	780
		APC-Cy™7	780
		APC-eFluor® 780	780
		BD™ APC-H7	780
<b>Brilliant Violet 421™</b>		421	
405	V1	<b>Brilliant Violet 421™</b>	421
	V2	Super Bright 436	436
	V3	eFluor® 450	450
		BD Horizon™ V450	450
	V4	<b>Pacific Blue™</b>	455
		BD Horizon™ BV480	480
	V5	<b>Brilliant Violet 510™</b>	510
		eFluor® 506	510
	V8	BD Horizon™ V500	510
		<b>Pacific Orange™</b>	550
	V9	<b>Brilliant Violet 570™</b>	570
		Super Bright 600	600
	V10	<b>Brilliant Violet 605™</b>	605
		eVolve® 605	605
		Qdot® 605	605
		Super Bright 645	645
	V11	<b>Brilliant Violet 650™</b>	650
		eVolve® 655	655
Qdot® 655		655	
Super Bright 702		702	
V13	Qdot® 705	705	
	<b>Brilliant Violet™ 711</b>	711	
V14	Brilliant Violet 750™	750	
	<b>Brilliant Violet 785™</b>	785	
V16	BD Horizon™ BV786	786	
	Qdot® 800	790	

