Symphony A5SE: Laser and filter configuration

Symphony A5SE

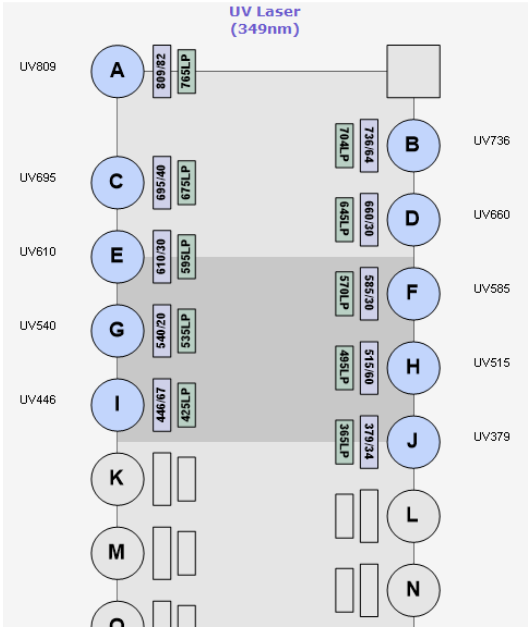
Laser	LP	BP	Parameter	Peak channel
349 nm 60 mW	365 LP	379/34	UV379	BUV395, Indo-1 (Ca2+ bound)
	425 LP	446/67	UV446	DAPI, Live/Dead blue, Zombie UV
	495 LP	515/60	UV515	BUV496, Live/dead aqua, Indo-1
	535 LP	540/20	UV540	
	570LP	585/30	UV585	BUV563
	595 LP	610/30	UV610	BUV615
	645 LP	660/30	UV660	BUV661
	675 LP	695/40	UV695	
	704 LP	736/64	UV736	BUV737
	765 LP	809/82	UV809	BUV805
405 nm 200 mW	415 LP	427/25	V427	BV421
	430 LP	450/40	V450	Pacific blue, eFluor 450, SB436, BFP
	465 LP	470/15	V470	BV480
	495 LP	510/40	V510	Horizon V500
	530 LP	540/20	V540	BV510
	570 LP	576/20	V576	BV570
	585 LP	595/30	V595	BV605, SB600
	605 LP	615/25	V615	
	645 LP	660/30	V660	BV650, SB645
	665 LP	680/30	V680	
	690 LP	710/40	V710	BV711, SB702
	730 LP	750/40	V750	BV750
	765 LP	785/50	V785	BV786, SB780
	810 LP	845/70	V845	

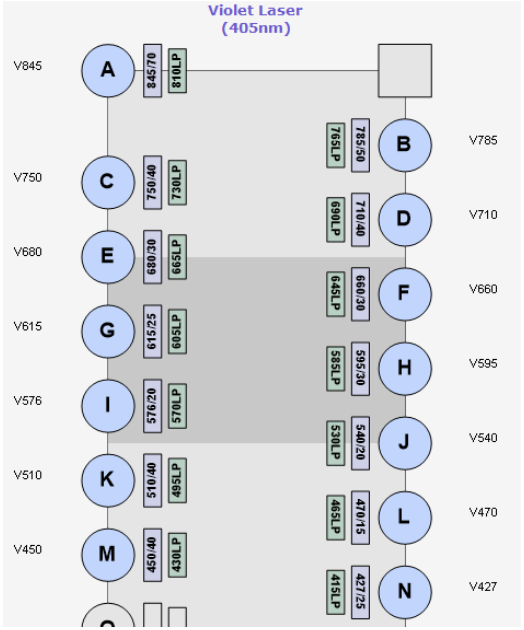
Laser	LP	BP	Parameter	Peak channel
488 nm 150 mW	500 LP	510/20	B510	FITC, BB515, GFP
	520 LP	537/32	B537	AF488, YFP, mVenus, Spark blue 550
	570 LP	576/20	B576	
	585 LP	602/40	B602	BB630
	645 LP	660/30	B660	BB660
	665 LP	675/20	B675	PerCP
	685 LP	710/50	B710	BB700, PerCP-e710, PerCP-Cy5.5
	724 LP	750/60	B750	BB755
	770 LP	810/79	B810	BB790
561 nm 150 mW	570 LP	585/30	YG585	PE, TdTomato, DsRed
	595 LP	602/40	YG602	PE-CF594, PE-Dazzle594, PE-e610, PI, mCherry
	645 LP	660/30	YG660	PE-Cy5, 7-AAD
	665 LP	670/20	YG670	
	680 LP	695/40	YG695	PE-Cy5.5
	699 LP	730/50	YG730	
	735 LP	750/40	YG750	
	750 LP	780/60	YG780	PE-Cy7
	800 LP	825/49	YG825	PE-Fire810
637 nm 140 mW	645 LP	660/30	R660	APC, TO-PRO-3
	665 LP	675/20	R675	AF647, DRAQ-7
	680 LP	680/30	R680	DRAQ-5
	699 LP	710/25	R710	AF700, APC-R700
	720 LP	730/50	R730	
	750 LP	780/60	R780	APC-Cy7, APC-H7, APC-e780, Live/Dead NIR

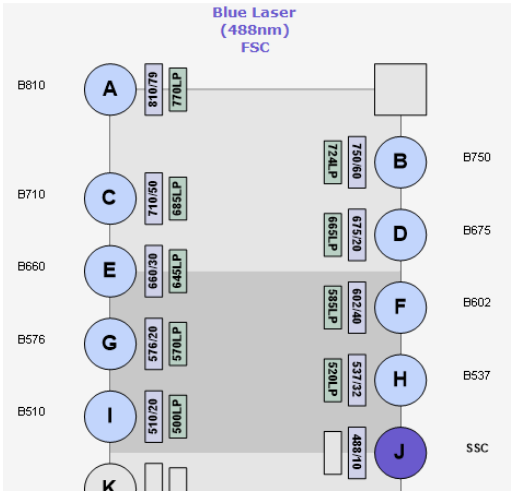
*PI and/or 7-AAD may be problematic depending on the panel

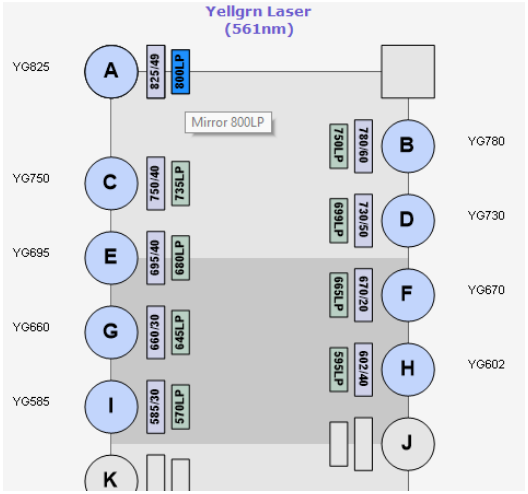
**Do not combine PerCP-Cy5.5 and PE-Cy5.5 in compensation mode

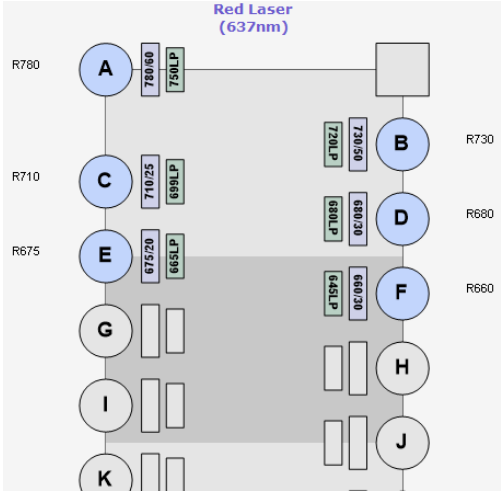
Symphony A5SE: Laser and filter configuration diagram



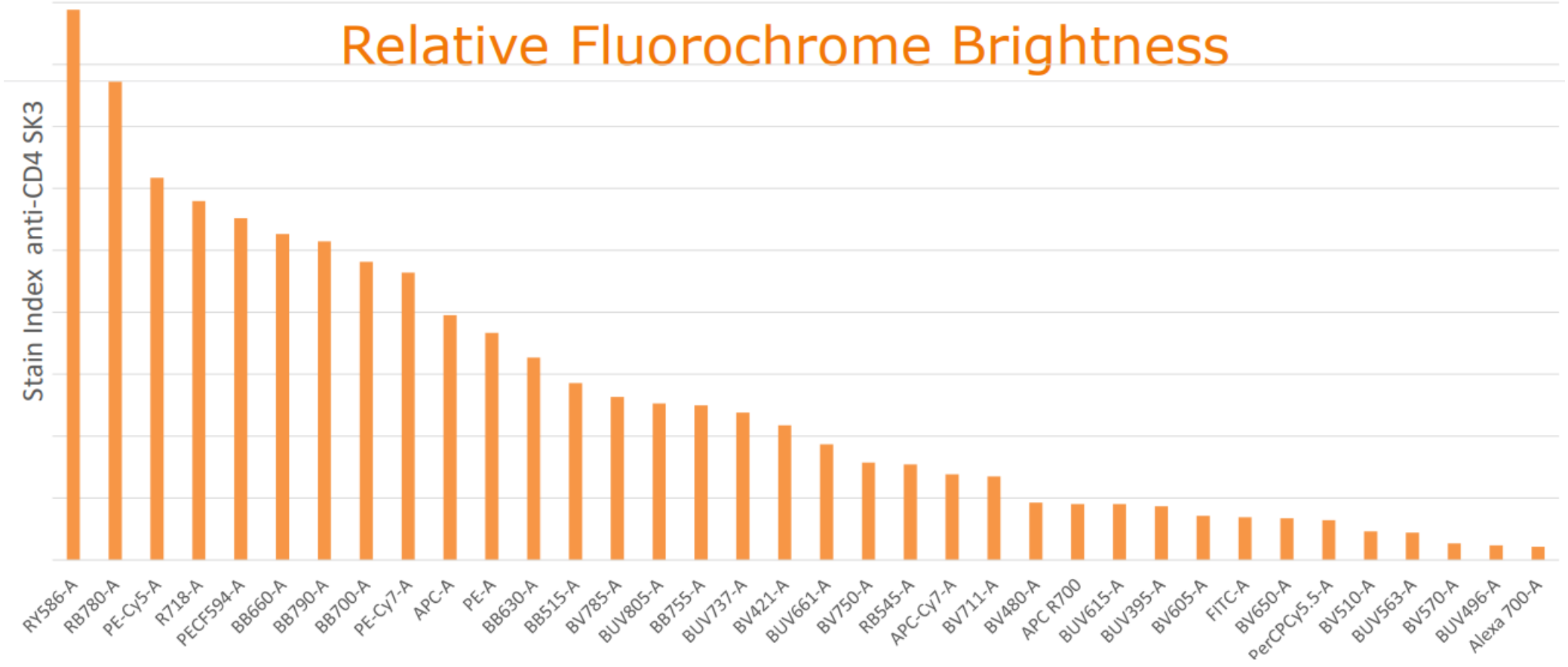








Symphony A5SE: Ranking of fluorochrome brightness



Stain indices and spread matrices were calculated by staining human PBMCs with anti-human CD4 (SK3 clone) conjugated to each of the fluors indicated at the optimal voltage settings in spectral mode. Voltage settings were optimized by voltration of unstained PBMCs.

SSM (Spillover Spread Matrix)

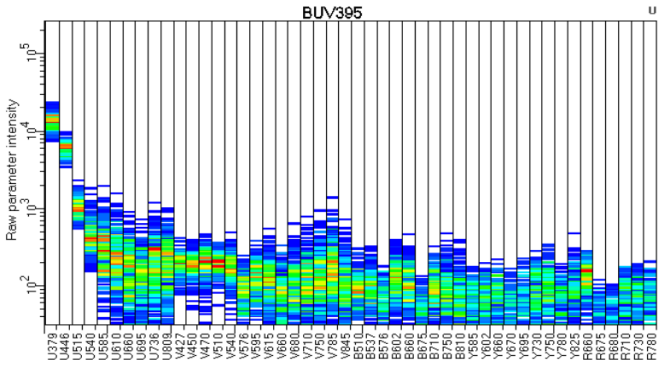
SSM	B510-A	B537-A	B602-A	B660-A	B710-A	B750-A	B810-A	R675-A	R710-A	R730-A	R780-A	UV379-A	UV515-A	UV585-A	UV610-A	UV660-A	UV736-A	UV809-A	V427-A	V470-A	V510-A	V576-A	V615-A	V660-A	V710-A	V750-A	V785-A	YG585-A	YG602-A	YG660-A	YG780-A	
BB515		0.786979	0.540129	0.492683	0.275193	0.207258	0.154638	0.322143	0.167488	0.294496	0	0	0	0	0.092489	0.129217	0.053435	0	0.098844	0.128047	0.089513	0	0.342746	0.15584	0	0	0.157038	0.495853	0.374909	0.108527	0.0873	BB515
FITC		0.909396	0	0.183481	0	0.139031	0.270582	0	0	0	0	0	2.59174	0	0	0	0	0	0.259767	0.575399	0	0	0.28572	0.332573	0	0.326288	0.160333	0	0	0	0.256872	FITC
RB545	0.575255		2.32457	1.32793	1.35229	0.83915	0.493366	0.750635	2.65369	1.43714	0	0	0	0	0.397089	0.446766	0.377912	0.249137	0.297272	0.168343	0.396211	0.550408	0.9149	0.474163	0.36152	0.023109	0.268053	1.47283	1.11031	0.400227	0.284799	RB545
BB630	0.163538	0.248867		2.41047	2.10934	1.51487	0.99535	1.6243	4.96252	3.61853	0	0	0.284279	0.519557	1.87191	1.18311	1.02916	0.831389	0.345165	0	0	0	3.4959	1.42638	0.919535	1.02438	0.741769	2.52147	4.43015	1.80444	0.889754	BB630
BB660	0	0.179764	0.791786		2.87011	2.00885	1.21639	4.93755	10.9718	12.494	0.827963	0	0.966744	0.451978	0.17921	1.9278	1.11079	0.833433	0.318786	0	0	0.196922	0.552403	3.00495	1.17325	0.992627	1.26227	0.339296	0.892221	1.91428	0.810709	BB660
BB700	0.0806	0.052777	0.219065	1.11688		2.79367	1.67602	2.09997	14.0618	10.9853	1.0763	0.119505	0.826338	0.393585	0.100068	0.517047	2.84462	1.67276	0.307751	0	0.106227	0.099963	0.350489	0.332712	2.99751	1.36366	1.35216	0.574067	0.568142	0.52328	0.618014	BB700
Percpcy5.5	0.252032	0.200395	0	0.97912		2.52792	1.78484	1.82541	14.05	12.3068	1.39176	0	0.443491	0	0.307332	0.508393	1.73831	1.9641	0.039168	0	0	0	0.221112	0.331645	1.49507	1.59008	1.90831	0.837368	0.741818	0.594251	1.77566	Percpcy5.5
BB755	0.083555	0.153869	0	0.654177	0.912572		1.90323	0.572212	6.76297	5.62329	1.08922	0.103308	0	0	0.16826	0.180492	1.77561	3.15575	0.262801	0.144014	0	0	0.302057	0	0.474003	2.86879	2.70232	0.703645	0.361843	0.221338	0.853997	BB755
BB790	0.135834	0.169739	0	0.573264	0.535605	3.19914		0.333485	2.38023	2.95758	1.10849	0.025113	0	0	0.130205	0.272013	0.838916	4.21679	0.312742	0	0	0	0.243353	0.125018	0.201499	1.00756	6.17087	0.637492	0.209875	0.141096	0.582636	BB790
RB780	0.217009	0.124977	0	0.115189	0.374708	2.21462		0.001139	1.99404	2.06771	0.495547	0	0	0	0	0.06581	0.346657	2.30957	0	0	0	0	0	0	0.045821	0.757195	2.42927	0.207238	0.280568	0	0.417215	RB780
APC	0.154471	0	0	2.90511	1.41666	0.365236	0.772933		15.7041	13.9375	1.29315	0	0	0.235478	0.190199	1.00176	1.04656	0.852184	0	0.195927	0.197127	0	0.24404	0.85482	0.528598	0.658282	0.455909	0.1336	0.452603	2.69769	1.29765	APC
APC R700	0	0	0.065357	0.238306	0.395045	0.336056	0.427397	0.890275		12.108	1.09548	0.097739	0.473586	0.147246	0	0.147324	0.787877	0.641404	0.054985	0	0	0	0.072456	0	0.403269	0.355064	0.52187	0	0.245297	0.250501	0.680308	APC R700
R718	0.09261	0.077692	0.604132	0.112467	1.14025	0.781139	3.37391	1.29119		147.882	17.56	0.240849	0	0	0	0.090654	1.19166	0.772356	0.470032	0.231665	0.103118	0	0	0.10116	2.01202	0.831921	1.27727	0.467257	0.379374	0.118359	7.55574	R718
AF700	0	0.100114	0.996074	0.285256	0.310283	0.280738	0.346524	0.555375	16.2124		1.48799	0.241043	0.990789	0.687086	0.131084	0	0.687318	0.782666	0.086103	0	0	0.228416	0.175404	0.203195	0.390253	0.486258	0.677386	0.293293	0.483035	0.301588	0.893082	AF700
APCCy7	0.115532	0.063174	0.17915	0.794993	0.389733	0.272394	0.850054	9.35189	6.23181	7.09596		0.210572	0.554085	0.342182	0	0.17478	0.372628	1.63091	0.147533	0	0	0	0.003093	0.088686	0.117035	0.419631	1.63968	0	0.325631	0.701649	1.74389	APCCy7
BUV395	0.14478	0	1.06045	0	0	0	0.090894	0.19092	0	0.563107	0		1.21861	0	0.280623	0.364803	0.23637	0	0	0	0	0	0.106195	0.15756	0.099226	0.469327	0.349723	0.810157	0.630283	0.162107	0	BUV395
BUV496	0.50399	0.408793	0.966685	0	0	0.234559	0	0.388484	0	2.29093	0	0.405754		1.98033	1.19021	0.391057	0.720419	0.270223	0.573002	0.227215	1.17565	0	0.980686	0.301609	0.387664	0	0	3.12979	2.06462	0	0	BUV496
BUV563	0	0.618523	2.42796	2.24813	0.9249	0.634083	0.678193	1.51612	4.20094	3.87473	0.208293	0.842591	0		2.07342	1.23434	0.845178	1.18104	0.456238	0	0	0.800892	1.50515	0.374646	0.227863	0.356369	0	8.74035	5.42284	1.32733	0.679709	BUV563
BUV615	0.163084	0.179351	4.22675	3.11674	1.3961	0.784504	0.796627	2.62072	5.57995	9.07503	0.389224	0.286176	0.937686	0		2.52106	2.34975	2.86587	0.370317	0	0	0	1.18892	0.700771	0.60872	0.479116	0.526397	3.33302	8.14576	3.16582	1.48769	BUV615
BUV661	0.117336	0.053448	0.632568	2.28654	1.37796	0.786555	0.842661	5.91349	19.8428	15.8282	1.19782	0.394014	1.15823	0.760515	0.404896		2.97145	2.56711	0.157387	0	0	0.259892	0.201246	0.882326	0.816955	0.724629	0.718227	0.834045	1.14034	2.46775	1.43512	BUV661
BUV737	0.14228	0.044752	0.73825	0.329746	0.801201	1.57121	1.0052	0.372134	13.0182	15.1185	1.37328	0.387083	0.425399	0.499919	0.060039	0.117417		3.25823	0.222949	0	0	0.201951	0.1802	0.223619	0.17943	0.771684	1.05161	0.813803	0.754348	0	0.661585	BUV737
BUV805	0.09868	0.040249	0.95701	0.10191	0.16414	0.149984	0.287559	0.057016	0.66024	0.335722	0.97689	0.159647	0.830205	0.74336	0.237983	0.073968	0.178204		0	0	0	0.063707	0.078821	0.210684	0.140627	0.117848	0.727718	0.586228	0.218969	0.084654	0.256015	BUV805
BV421	0.094214	0.12658	1.23588	0.181379	0.251602	0.188915	0	0.254922	0	0.405509	0	0.16351	1.50988	0.9852	0.187778	0.080022	0.42646	0		1.01264	0.889676	0.496014	0.295061	0.24101	0.290019	0.327818	0.29912	1.78443	0.697989	0	0	BV421
BV480	0.651766	0.224732	1.83998	0.686664	0.264585	0	0.442308	0.397066	2.00277	0.418138	0	0.422066	1.12403	1.48167	0.851993	0.667894	0.448577	0	0.814501		2.26993	1.86357	1.44548	0.810564	0.303254	0.343824	0.269277	3.3814	1.51479	0.139475	0	BV480
BV510	0.250572	0.308422	1.57844	0.901941	0.54246	0.259723	0.317657	1.17627	5.33437	3.17258	0	0	0	0	1.40381	1.47722	1.47153	1.77027	1.01064	1.72938		2.0907	2.63788	1.88522	1.22063	0.907475	1.26239	5.4029	3.06192	0.561275	0.419705	BV510
BV570	0	0.023984	3.05162	3.11319	1.48417	0.892795	0.741514	2.17581	4.54534	2.57648	0.741726	0	0	0	2.38183	2.04907	1.58143	1.22401	2.11905	0	0		3.90031	2.33578	1.52698	0.890567	1.45812	7.1501	6.35748	3.05168	0.747388	BV570
BV605	0	0	2.65638	3.27413	1.67837	0.810039	1.13155	1.91521	8.4301	6.6123	0.01208	0.598059	1.40643	0	2.43668	2.37153	2.22322	2.26568	0.745927	0	0	1.30343		2.16625	2.4335	2.41691	1.94788	5.1497	5.82278	3.86586	1.78082	BV605
BV650	0.198345	0.216025	1.59188	2.15158	0.998075	0.759177	0.67114	3.78653	15.4596	12.795	0.854771	0	2.26443	1.52741	0.816806	4.1065	2.83217	2.74307	1.29216	0	0.350355	0	1.15393		2.39104	2.45493	2.77158	1.80504	2.00047	2.75312	1.23688	BV650
BV711	0.130842	0	0.940962	0.414111	1.4959	1.56365	0.763706	1.2059	31.7108	23.9542	1.8487	0.189563	2.16055	1.22	0.212457	0.12767	6.95022	3.47514	0.671208	0	0.230585	0	0	0		2.98471	3.83895	0.791256	0.676752	0.279075	1.38351	BV711
BV750	0.069548	0.003962	0.563621	0.214776	0.296843	1.26002	0.627388	0.161729	7.71856	6.8633	1.48046	0	1.39546	1.05367	0.23561	0.263888	3.84332	4.1035	0.510116	0	0.413381	0	0.156942	0.213773	0.780041		4.11943	0.636535	0.544232	0	0.446854	BV750
BV786	0.186257	0.100476	0.378419	0	0.160771	0.360234	0.49588	0.220222	2.7811	2.3052	1.2484	0	0.240363	0	0.091697	0	0.929131	6.97228	0.567435	0.141889	0.173091	0	0	0	0.184832	1.39184		0.433796	0.422124	0	0.443875	BV786
PE	0.13137	0.176415	2.63279	2.15731	1.09559	0.720286	0.49337	1.08412	1.96806	1.28143	0.130313	0	0.55996	1.13053	0.655856	0.506791	0.415536	0.297474	0.608125	0	0.073715	1.3524	1.31633	0.713718	0.350319	0.39287	0.399912		3.0927	1.33339	0.661489	PE
RY586	0	0.056207	1.88085	1.64198	0.842126	0.271877	0.41948	0.542597	1.39484	0.401402	0	0.02932	0	0	0.206106	0.184561	0.227823	0.156125	0	0	0	0.176511	0.58205	0.271801	0.142204	0.060313	0.189006		4.64887	1.64351	0.778031	RY586
PECF594	0.107174	0.109804	3.26729	2.39608	1.71155	1.22768	0.873996	1.16657	2.34677	1.94098	0.081258	0	0.404095	0.106813	0.685496	0.650807	0.526016	0.393415	0.20612	0	0	0.269474	1.6529	0.773446	0.543346	0.482159	0.5241	2.53566		2.19624	1.14812	PECF594
PECy5	0.077385	0.072683	0.41533	7.03722	3.69701	2.69212	1.72666	4.60014	13.1974	11.3931	1.01098	0	0.453044	0.138871	0.118584	1.10104	1.04109	0.836593	0.342487	0.009775	0	0.016002	0.365297	1.73233	0.876019	1.01449	1.15673	0.721747	0.696241		2.28058	PECy5
PECy7	0	0.030263	0.283633	0.223098	0.27638	1.86469	3.28295	0.170309	1.66673	1.54757	1.06065	0.088625	0.453416	0.33169	0.066749	0.101574	0.293624	1.68812	0.156785	0	0	0.081848	0.098157	0.112259	0.14759	0.574762	2.86499	0.943079	0.496913	0.190764		PECy7
	B510-A	B537-A	B602-A	B660-A	B710-A	B750-A	B810-A	R675-A	R710-A	R730-A	R780-A	UV379-A	UV515-A	UV585-A	UV610-A	UV660-A	UV736-A	UV809-A	V427-A	V470-A	V510-A	V576-A	V615-A	V660-A	V710-A	V750-A	V785-A	YG585-A	YG602-A	YG660-A	YG780-A	

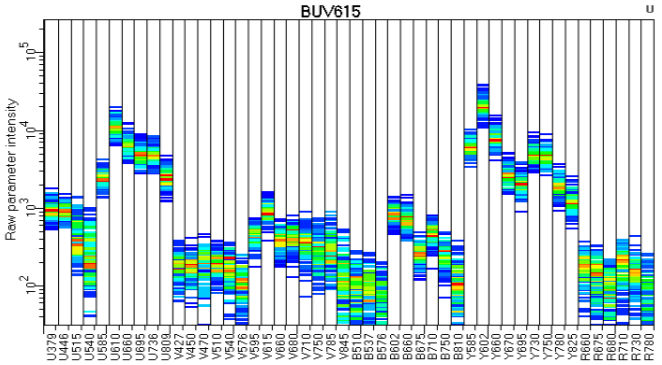
TSM (Total Spread Matrix)

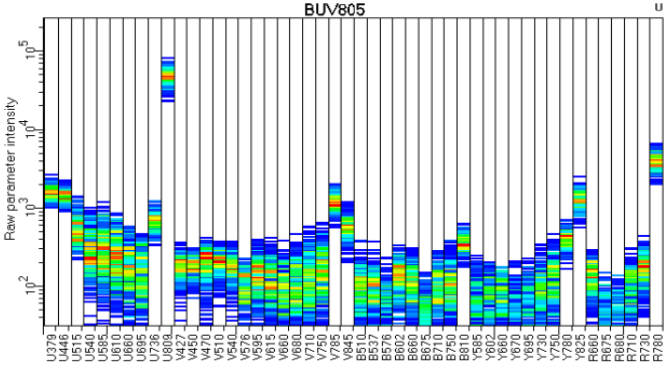
TSM	B510-A	B537-A	B602-A	B660-A	B710-A	B750-A	B810-A	R675-A	R710-A	R730-A	R780-A	UV379-A	UV515-A	UV585-A	UV610-A	UV660-A	UV736-A	UV809-A	V427-A	V470-A	V510-A	V576-A	V615-A	V660-A	V710-A	V750-A	V785-A	YG585-A	YG602-A	YG660-A	YG780-A	
BB515		196.316	134.738	122.902	68.6482	51.7016	38.5752	80.3602	41.7808	73.4636	0	0	0	0	23.0719	32.2339	13.3296	0	24.6572	31.942	22.3294	0	85.4998	38.8751	0	0	39.1738	123.693	93.5229	27.0725	21.7774	BB515
FITC		79.0018	0	15.9395	0	12.078	23.5062	0	0	0	0	0	225.152	0	0	0	0	0	22.5667	49.9866	0	0	24.8213	28.8916	0	28.3456	13.9286	0	0	0	22.3152	FITC
RB545	62.9722		254.467	145.366	148.033	91.8603	54.008	82.1707	290.495	157.321	0	0	0	0	43.4687	48.9067	41.3694	27.2726	32.5419	18.4282	43.3725	60.2522	100.153	51.9059	39.5749	2.52973	29.3433	161.229	121.543	43.8122	31.1765	RB545
BB630	31.2427	47.5442		460.503	402.973	289.406	190.154	310.311	948.053	691.293	0	0	54.3094	99.2576	357.614	226.025	196.614	158.831	65.9412	0	0	0	667.866	272.499	175.67	195.701	141.71	481.707	846.347	344.726	169.981	BB630
BB660	0	45.8784	202.075		732.492	512.687	310.439	1260.13	2800.16	3188.64	211.308	0	246.727	115.351	45.7368	492.001	283.489	212.704	81.3587	0	0	50.2573	140.981	766.906	299.43	253.332	322.148	86.593	227.707	488.552	206.904	BB660
BB700	21.5591	14.1168	58.596	298.745		747.257	448.306	561.705	3761.29	2938.37	287.89	31.9654	221.031	105.277	26.7665	138.301	760.886	447.435	82.318	0	28.4139	26.7383	93.7498	88.9946	801.781	364.754	361.679	153.553	151.968	139.968	165.308	BB700
Percpcy5.5	21.8778	17.3955	0	84.9933		219.438	154.934	158.456	1219.62	1068.3	120.813	0	38.4976	0	26.6782	44.1314	150.896	170.496	3.39998	0	0	0	19.1938	28.7887	129.78	138.028	165.653	72.6883	64.394	51.5844	154.137	Percpcy5.5
BB755	14.9157	27.4678	0	116.78	162.908		339.756	102.148	1207.29	1003.84	194.441	18.4421	0	0	30.0368	32.2206	316.974	563.349	46.914	25.7086	0	0	53.9217	0	84.6167	512.122	482.404	125.611	64.5944	39.5121	152.451	BB755
BB790	31.2793	39.0868	0	132.009	123.337	736.685		76.7936	548.109	681.058	255.258	5.78291	0	0	29.9831	62.638	193.182	971.024	72.017	0	0	0	56.0384	28.7887	46.4002	232.018	1421	146.799	48.3291	32.491	134.167	BB790
RB780	61.4081	35.3655	0	32.5957	106.033	626.683		0.322401	564.264	585.111	140.228	0	0	0	0	18.6226	98.0954	653.551	0	0	0	0	0	0	12.9663	214.268	687.424	58.6433	79.3939	0	118.062	RB780
APC	31.3454	0	0	589.505	287.468	74.1137	156.844		3186.68	2828.2	262.405	0	0	47.7831	38.5953	203.277	212.369	172.925	0	39.7576	40.0011	0	49.5206	173.46	107.263	133.579	92.5131	27.1102	91.8422	547.415	263.32	APC
APC R700	0	0	25.2128	91.931	152.396	129.64	164.877	343.441		4670.89	422.6	37.7047	182.695	56.8031	0	56.8329	303.939	247.434	21.2116	0	0	0	27.9512	0	155.569	136.973	201.321	0	94.6279	96.6356	262.442	APC R700
R718	29.5376	24.7795	192.687	35.871	363.68	249.143	1076.1	411.823		47166.7	5600.73	76.8182	0	0	0	28.914	380.077	246.341	149.916	73.8891	32.8894	0	0	32.2646	641.728	265.339	407.384	149.031	121	37.7505	2409.89	R718
AF700	0	17.109	170.225	48.7489	53.0261	47.9769	59.2194	94.9112	2770.64		254.291	41.1931	169.321	117.42	22.4017	0	117.46	133.754	14.7145	0	0	39.0353	29.9757	34.7251	66.6924	83.0994	115.762	50.1224	82.5486	51.54	152.624	AF700
APCCy7	25.3335	13.8525	39.2832	174.323	85.4589	59.7293	186.396	2050.64	1366.48	1555.97		46.1734	121.497	75.0321	0	38.325	81.7084	357.618	32.3505	0	0	0	0.678318	19.4467	25.6629	92.0149	359.541	0	71.4029	153.855	382.393	APCCy7
BUV395	18.5589	0	135.936	0	0	0	11.6514	24.4735	0	72.1829	0		156.21	0	35.9721	46.7628	30.2995	0	0	0	0	0	13.6128	20.1971	12.7195	60.1615	44.8299	103.851	80.7939	20.78	0	BUV395
BUV496	41.3448	33.5354	79.302	0	0	19.242	0	31.8693	0	187.936	0	33.2861		162.457	97.6387	32.0804	59.0996	22.1678	47.0062	18.6396	96.4448	0	80.4506	24.7425	31.8021	0	0	256.753	169.371	0	0	BUV496
BUV563	0	60.1876	236.261	218.762	90.0006	61.7016	65.9939	147.532	408.787	377.044	20.2687	81.9913	0		201.761	120.111	82.243	114.926	44.3958	0	0	77.9336	146.464	36.4562	22.173	34.6778	0	850.511	527.688	129.161	66.1415	BUV563
BUV615	18.5249	20.3726	480.121	354.034	158.585	89.1126	90.4897	297.69	633.832	1030.84	44.2124	32.507	106.513	0		286.37	266.911	325.537	42.0647	0	0	0	135.05	79.6013	69.1451	54.4233	59.7939	378.601	925.286	359.609	168.989	BUV615
BUV661	21.6016	9.83975	116.456	420.953	253.683	144.805	155.134	1088.68	3653.07	2913.99	220.519	72.5382	213.23	140.011	74.5416		547.045	472.607	28.9751	0	0	47.8463	37.0495	162.437	150.402	133.405	132.226	153.548	209.937	454.315	264.206	BUV661
BUV737	31.401	9.87663	162.931	72.7749	176.825	346.765	221.846	82.1298	2873.11	3336.64	303.082	85.4292	93.8854	110.332	13.2505	25.914		719.09	49.2047	0	0	44.5704	39.7701	49.3526	39.6002	170.31	232.091	179.606	166.484	0	146.012	BUV737
BUV805	24.239	9.88644	235.073	25.0323	40.318	36.841	70.6339	14.0049	162.176	82.4643	239.956	39.2145	203.925	182.593	58.4564	18.1688	43.7726		0	0	0	15.6485	19.361	51.7508	34.5425	28.9472	178.751	143.997	53.786	20.7938	62.8855	BUV805
BV421	15.0775	20.2572	197.783	29.0269	40.2649	30.233	0	40.7964	0	64.8954	0	26.1673	241.633	157.666	30.051	12.8063	68.2482	0		162.057	142.379	79.3794	47.22	38.57	46.4131	52.4622	47.8695	285.571	111.702	0	0	BV421
BV480	79.5934	27.4442	224.698	83.8552	32.3111	0	54.0145	48.4896	244.578	51.0629	0	51.5426	137.266	180.941	104.045	81.563	54.7801	0	99.4666		277.204	227.578	176.521	98.9858	37.0333	41.9877	32.884	412.935	184.986	17.0326	0	BV480
BV510	18.5945	22.8874	117.133	66.9315	40.255	19.2736	23.5728	87.2891	395.854	235.431	0	0	0	0	104.174	109.622	109.199	131.369	74.9978	128.334		155.147	195.752	139.899	90.5808	67.3422	93.68	400.94	227.22	41.6513	31.1456	BV510
BV570	0	1.24729	158.701	161.903	77.1848	46.4302	38.5628	113.154	236.382	133.991	38.5738	0	0	0	123.868	106.563	82.243	63.6552	110.202	0	0		202.837	121.474	79.4113	46.3143	75.8302	371.844	330.624	158.704	38.8682	BV570
BV605	0	0	238.235	293.637	150.523	72.6476	101.482	171.764	756.045	593.017	1.08334	53.6363	126.134	0	218.531	212.688	199.388	203.195	66.8977	0	0	116.897		194.278	218.246	216.758	174.694	461.845	522.21	346.705	159.711	BV605
BV650	18.5589	20.2131	148.95	201.32	93.3886	71.0352	62.7977	354.301	1446.53	1197.21	79.9798	0	211.88	142.918	76.4274	384.24	265.002	256.665	120.906	0	32.7823	0	107.972		223.727	229.705	259.334	168.895	187.181	257.606	115.733	BV650
BV711	18.5249	0	133.224	58.6308	211.794	221.386	108.127	170.735	4489.7	3391.49	261.743	26.8388	305.896	172.73	30.0802	18.0758	984.029	492.019	95.0313	0	32.6469	0	0	0		422.583	543.528	112.028	95.8162	39.5121	195.881	BV711
BV750	10.562	0.60168	85.5955	32.6174	45.0807	191.356	95.2797	24.5613	1172.2	1042.31	224.833	0	211.924	160.018	35.7814	40.0759	583.675	623.187	77.47	0	62.7791	0	23.8343	32.4651	118.463		625.606	96.6688	82.651	0	67.8625	BV750
BV786	46.6966	25.1904	94.8737	0	40.307	90.3145	124.322	55.212	697.252	577.938	312.986	0	60.2617	0	22.9895	0	232.943	1748.03	142.262	35.573	43.3958	0	0	0	46.3393	348.948		108.757	105.831	0	111.284	BV786
PE	29.1382	39.1294	583.959	478.496	243.004	159.761	109.431	240.461	436.519	284.224	28.9038	0	124.2	250.755	145.47	112.407	92.1669	65.9803	134.883	0	16.3501	299.965	291.964	158.304	77.7015	87.1394	88.7013		685.968	295.749	146.72	PE
RY586	0	20.3207	679.988	593.628	304.456	98.2925	151.656	196.167	504.279	145.12	0	10.6001	0	0	74.5141	66.7248	82.3654	56.4445	0	0	0	63.8144	210.43	98.2648	51.4113	21.8053	68.332		1680.72	594.181	281.283	RY586
PECF594	26.7815	27.4386	816.457	598.752	427.695	306.784	218.401	291.513	586.431	485.029	20.3055	0	100.979	26.6914	171.297	162.629	131.445	98.3097	51.5068	0	0	67.3382	413.04	193.275	135.776	120.486	130.966	633.631		548.815	286.9	PECF594
PECy5	21.5489	20.2396	115.654	1959.61	1029.48	749.658	480.813	1280.97	3674.99	3172.55	281.521	0	126.156	38.6705	33.0213	306.599	289.906	232.961	95.3702	2.7221	0	4.45585	101.722	482.39	243.939	282.498	322.107	200.98	193.878		635.058	PECy5
PECy7	0	10.2685	96.2406	75.7001	93.7796	632.715	1113.95	57.7882	565.545	525.112	359.894	30.0717	153.85	112.547	22.649	34.4654	99.6308	572.803	53.1992	0	0	27.772	33.3061	38.091	50.0793	195.025	972.131	320	168.61	64.7288		PECy7
	B510-A	B537-A	B602-A	B660-A	B710-A	B750-A	B810-A	R675-A	R710-A	R730-A	R780-A	UV379-A	UV515-A	UV585-A	UV610-A	UV660-A	UV736-A	UV809-A	V427-A	V470-A	V510-A	V576-A	V615-A	V660-A	V710-A	V750-A	V785-A	YG585-A	YG602-A	YG660-A	YG780-A	

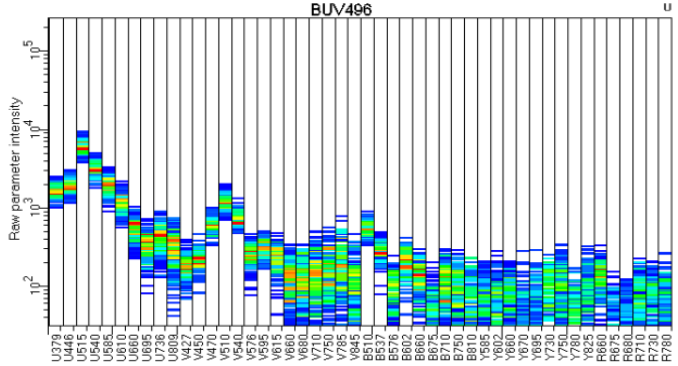
**The TSM provides the measurement of total spread and is dependent on MFI (fluorochrome brightness and / or antigen density). TSM was developed specifically to measure total spread and aid panel design (TSM=SSM*√ Δ MFI).
This TSM table was generated using CD4 stained single color.
The TSM value will increase or decrease for antigens expressed at higher or lower levels than CD4.
The same value across different rows will translate into the same amount of spread.

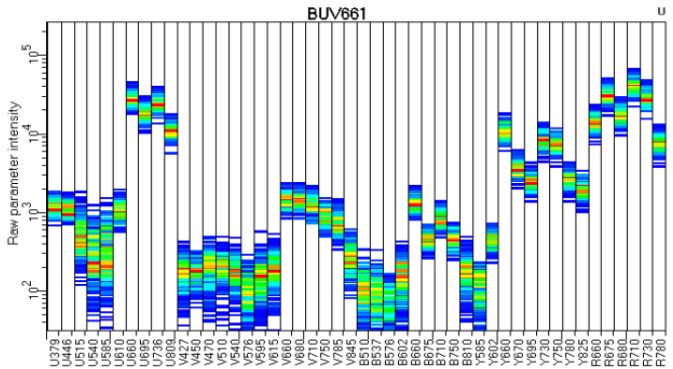
Fluors with primary **UV (349 nm)** excitation

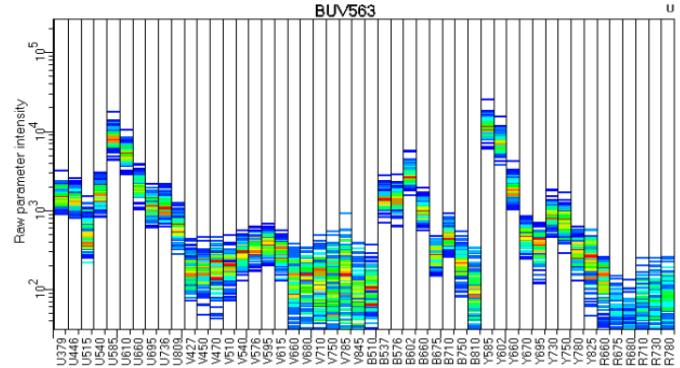


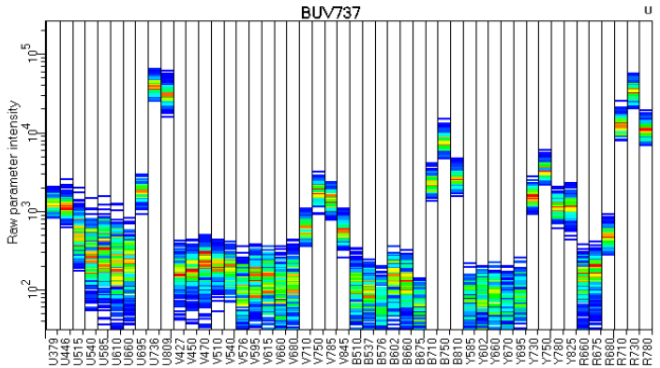




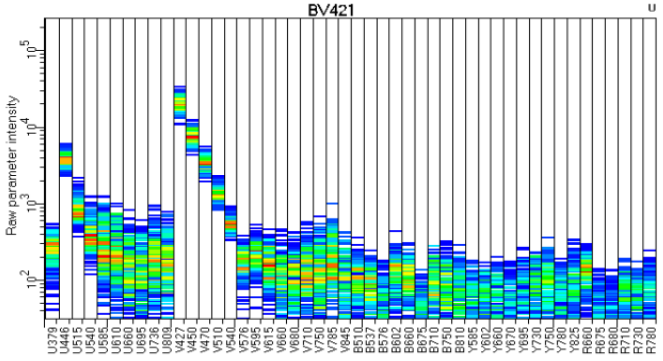


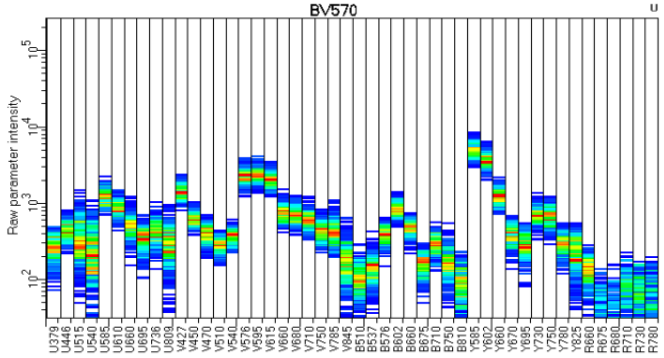


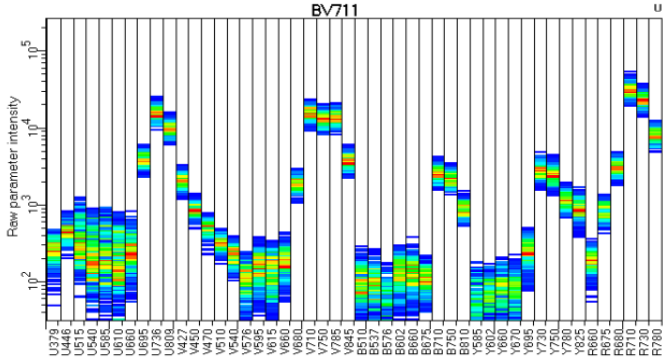


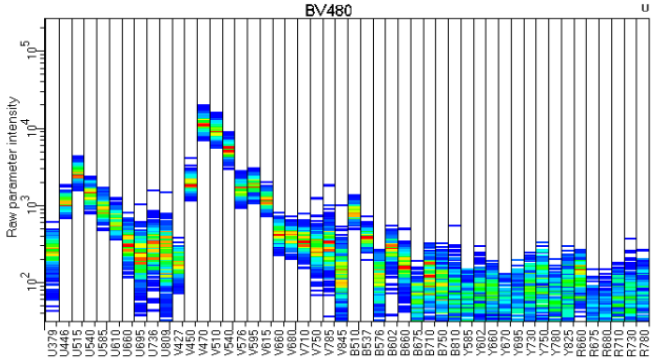


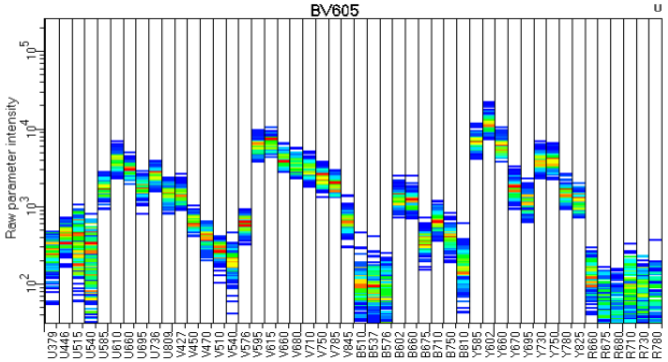
Fluors with primary **Violet (405 nm)** excitation

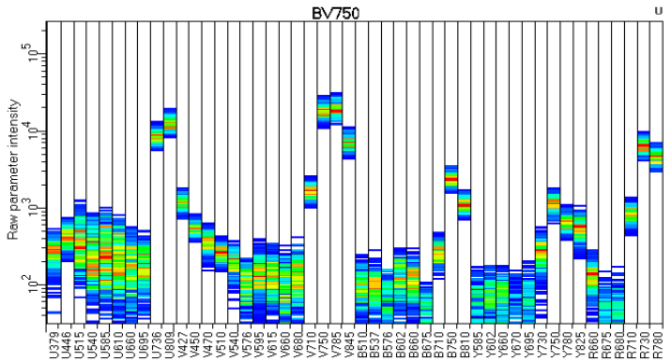


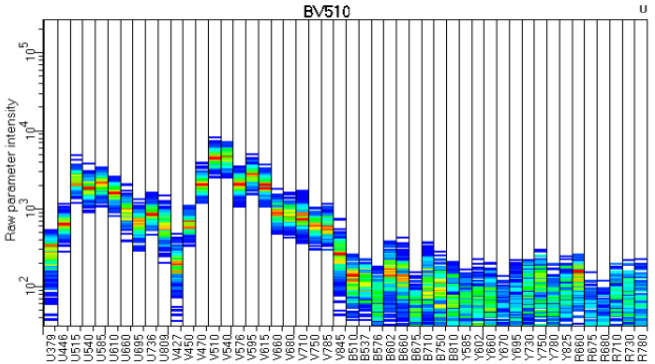


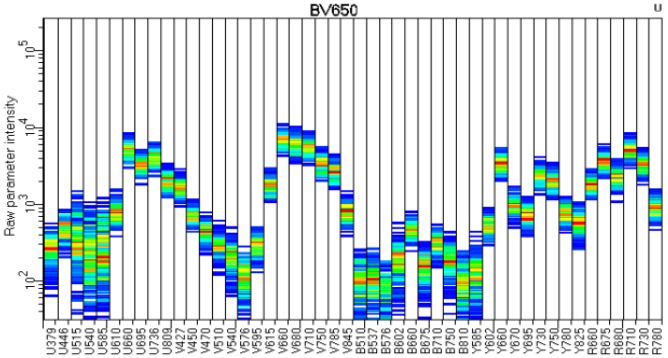


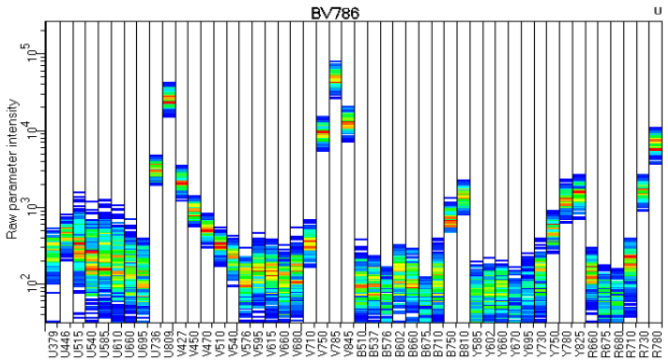




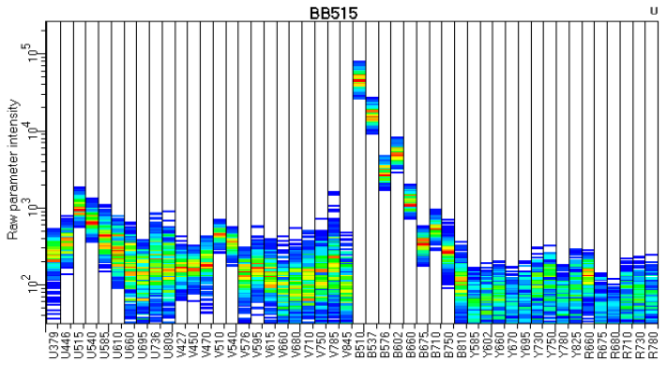


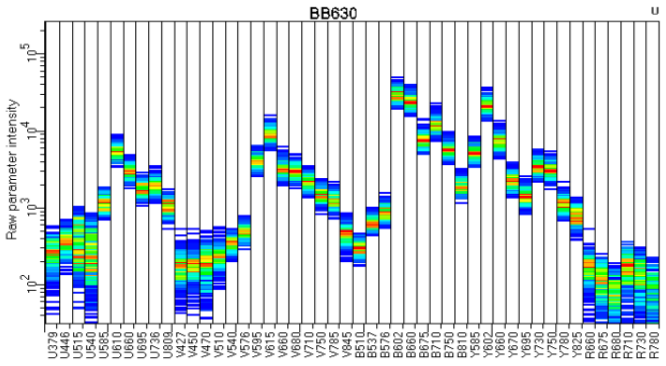


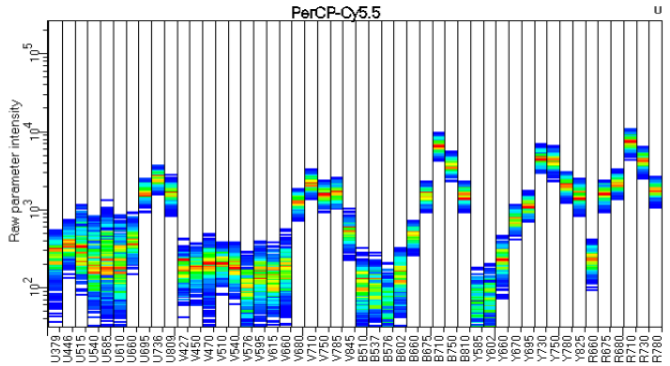


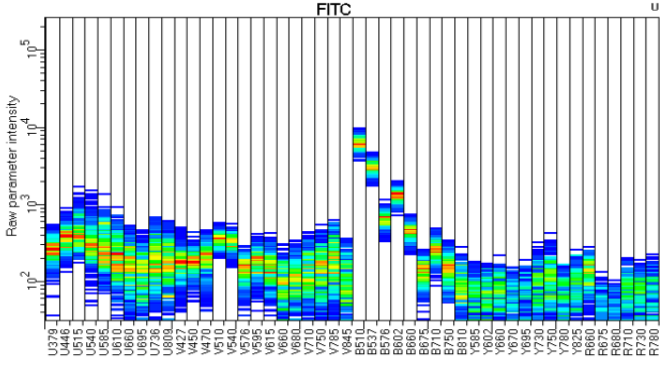


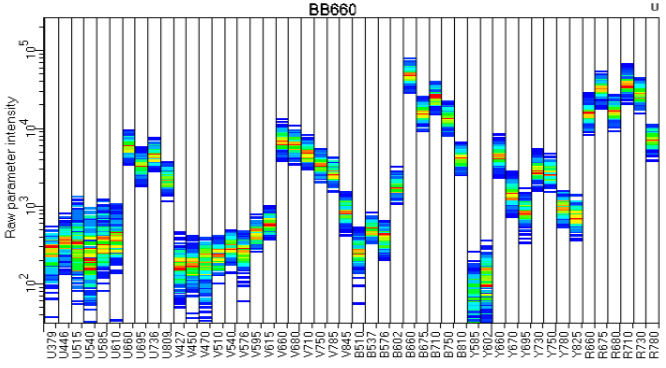
Fluors with primary **Blue (488 nm)** excitation

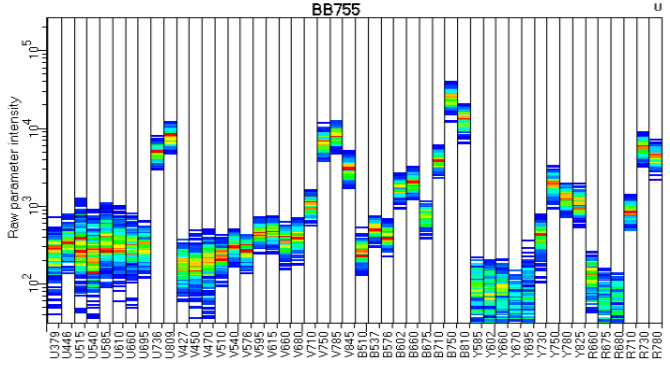


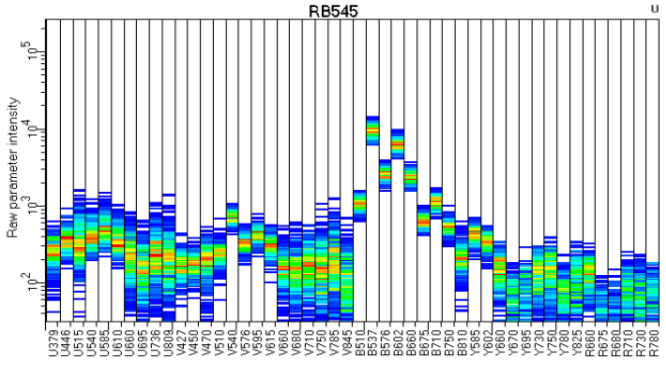


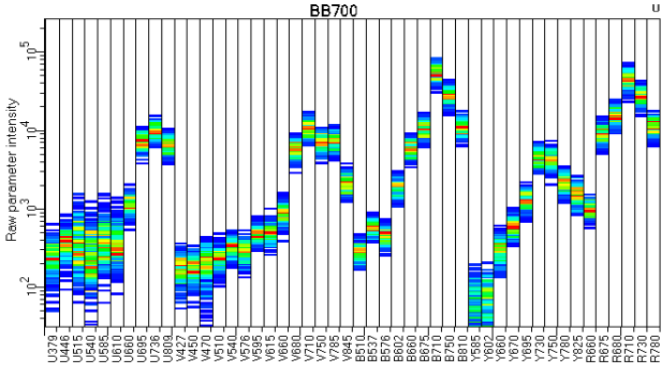


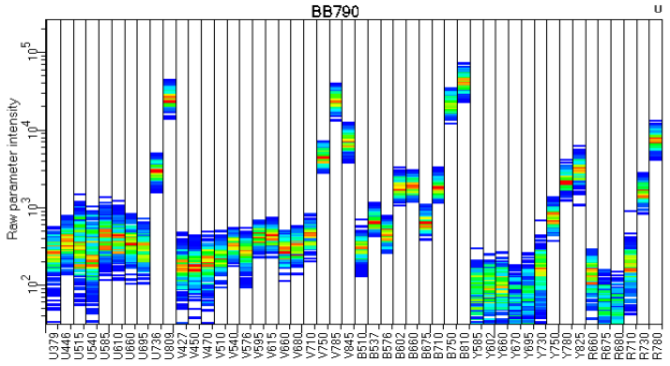




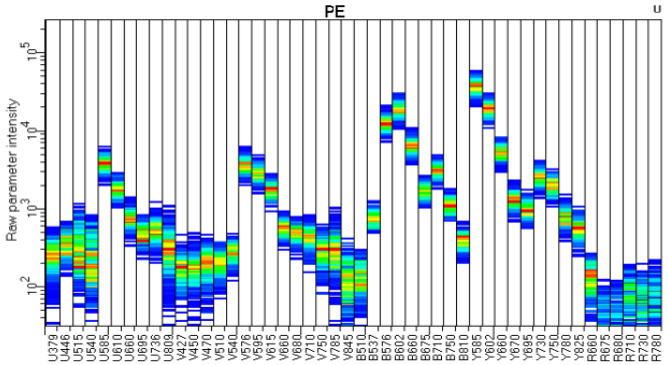


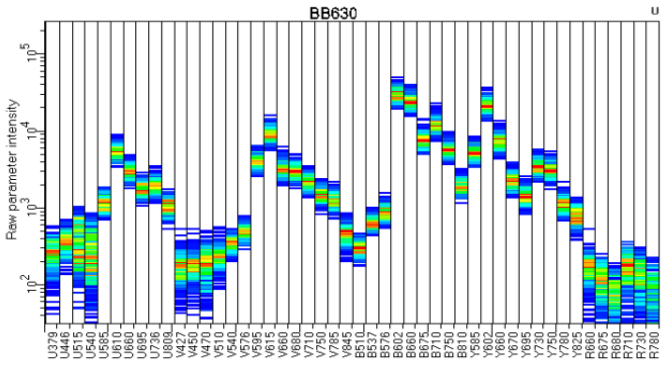


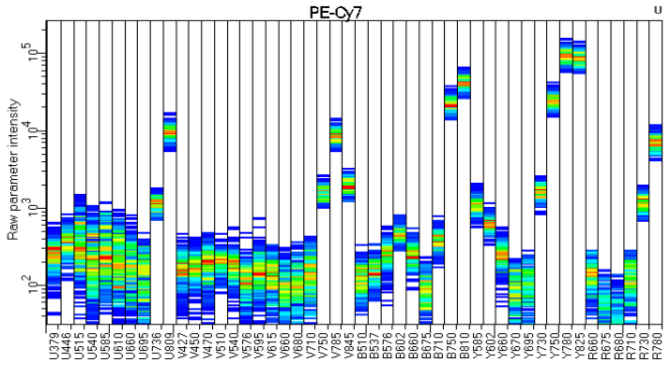


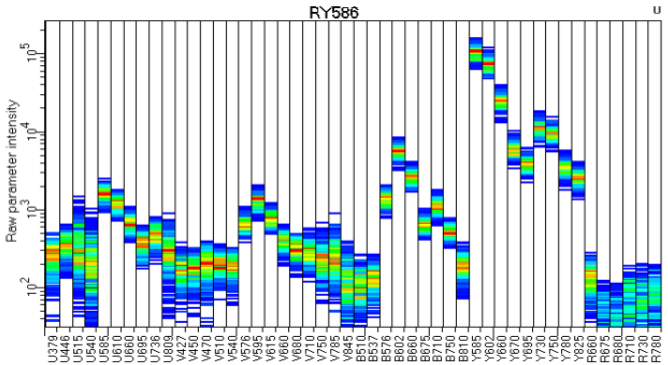


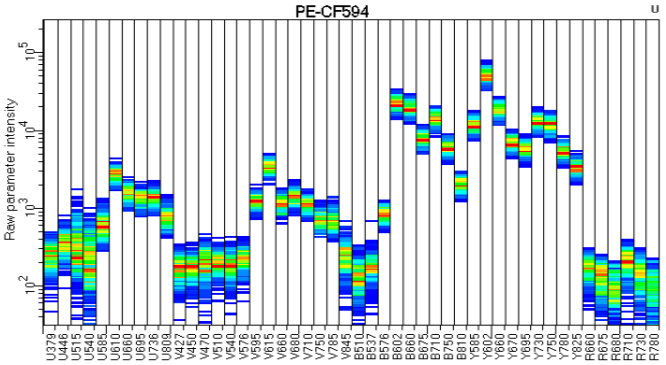
Fluors with primary **Yellow-Green (561 nm)** excitation

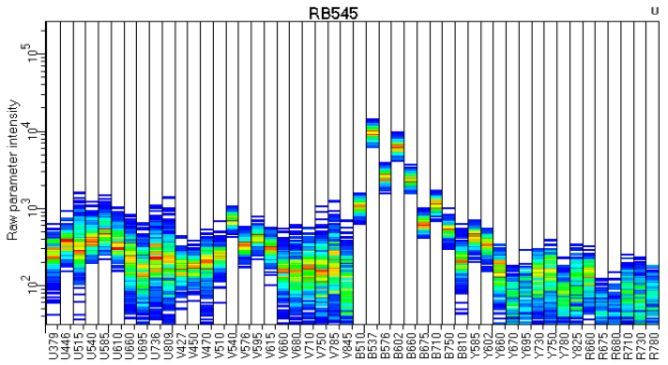


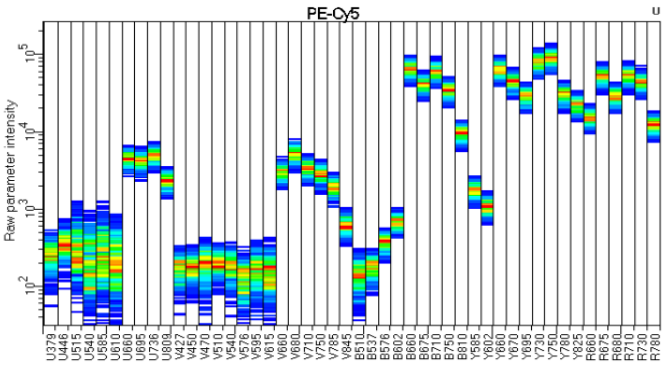












Fluors with primary **Red (537 nm)** excitation