Fluorescent Probes

The following data table contains the mean lifetimes, absorption and emission maxima of the free and bound forms of important fluorescent probes for ion recognition.

Fluorescent Probes	Mean Lifetime [ns]		Absorption Max [nm]		Emission Max [nm]	
	free	bound	free	bound	free	bound
a) Calcium Probes						
Fura-2	1.09	1.68	362	335	500	503
Indo-1	1.4	1.66	349	331	482	398
Ca-Green	0.92	3.66	506	506	534	534
Ca-Orange	1.20	2.31	555	555	576	576
Ca-Crimson	2.55	4.11	588	588	610	612
Quin-2	1.35	11.6	356	336	500	503
b) Magnesium Probes						
Mg-Quin-2	0.84	8.16	353	337	487	493
Mg-Green	1.21	3.63	506	506	532	532

Fluorescent Probes	Mean Lifetime [ns]		Absorption Max [nm]		Emission Max [nm]	
c) Potassium Probe						
PBFI	0.52	0.59	350	344	546	504
d) Sodium Probe						
Sodium Green	1.13	2.39	507	507	532	532
e) pH Probes						
SNAFL-1	1.19	3.74	539	510	616	542
Carboxy-SNAFL-1	1.11	3.67	540	508	623	543
Carboxy-SNAFL-2	0.94	4.60	547	514	623	545
Carboxy-SNARF-1	1.51	0.52	576	549	638	585
Carboxy-SNARF-2	1.55	0.33	579	552	633	583
Carboxy-SNARF-6	1.03	4.51	557	524	635	559
Carboxy-SNARF-X	2.59	1.79	575	570	630	600
Resorufin	2.92	0.45	571	484	587	578

Fluorescent Probes	Mean Lifetime [ns]		Absorption Max [nm]		Emission Max [nm]	
BCECF	4.49	3.17	503	484	528	514

References:

1. Topics in Fluorescence Spectroscopy (Vol. 4): Probe Design and Chemical Sensing, J.R. Lakowicz (Editor), Plenum Press, New York and London, 1994

1602 Newton Drive
Champaign, Illinois 61822 USA
Telephone: (217) 359-8681
Telefax: (217) 359-7879
Email: iss@iss.com