

Spectra of available fluorescent dyes

Fluorescent Dye	Abs	Em	ε	MW	Labelling Position			Purification Option			Alternative to
					5'	Int	3'	HPSF®	HPLC	HYPUR®	
Alexa Fluor 350	346	442	19 000	409.35	●	●	●	●			AMCA
Dy-415	418	467	34 000	552.00	●	●	●		●		Coumarin (DEAC)
ATTO 425	436	484	45 000	499.00	●	●	●		●		Alexa Fluor 425
ATTO 465	453	508	75 000	393.00	●	●	●		●		LC 480 Cyan 500
Bodipy FL	504	510	70 000	391.30	●	●	●		●		
Alexa Fluor 488	495	519	71 000	630.00	●	●	●		●		Cy2 DY-495 ATTO 495
FAM	495	520	83 000	474.50	●			●	●	●	Cy2 DY-495 ATTO 495
FITC	495	520	73 000	505.00	●	●	●				Cy2 DY-495 ATTO 495
Fluorescein	495	520	83 000	504.00			●		●		DY-495 ATTO 495
Fluorescein-dT	494	522	75 000	472.71		●			●		DY-495 ATTO 495
ATTO 488	501	523	90 000	687.00	●	●	●		●		Cy2
Oregon Green 488	496	524	76 000	510.00	●	●	●		●		Cy2
Oregon Green 514	506	526	85 000	609.40	●	●	●		●		Cy2
Rhodamine Green	503	528	74 000	472.00	●	●	●		●		Cy2
TET	521	536	73 000	612.30	●			●	●	●	CAL Fluor Gold 540
ATTO 520	516	538	110 000	464.00	●	●	●		●		CAL Fluor Gold 540 Rhodamine 6G
JOE	520	548	73 000	603.40	●	●	●		●		CAL Fluor Gold 540 Rhodamine 6G
Yakima Yellow	530	549	84 000	654.30	●				●		VIC CAL Fluor 560
Bodipy 530/550	534	551	77 000	514.31	●	●	●		●		VIC CAL Fluor 560
HEX	535	556	73 000	681.20	●			●	●	●	VIC CAL Fluor 560 SIMA
Alexa Fluor 555	555	565	150 000	940.00	●	●	●		●		Cy3 TRITC & TMR Alexa Fluor 546
Dy-549	553	566	150 000	916.00	●	●	●		●		Quasar 570 Dragonfly Orange
Bodipy TMR-X	544	570	56 000	610.55	●	●	●		●		Quasar 570 Dragonfly Orange
Cy3	552	570	150 000	444.60	●	●	●		●		Quasar 570 Dragonfly Orange TYE 563
ATTO 550	554	576	120 000	691.00	●	●	●		●		NED Cy3 Rhodamine B & 6G
TAMRA	544	576	90 000	512.58 612.70	●		●		●		Rhodamine 6G Rhodamine B

Spectra of available fluorescent dyes

Fluorescent Dye	Abs	Em	ε	MW	Labelling Position			Purification Option			Alternative to
					5'	Int	3'	HPSF®	HPLC	HYPUR®	
Rhodamine Red	560	580	129 000	770.00	●	●	●	●			Rhodamine 6G Rhodamine B
ATTO 565	563	592	120 000	608.00	●	●	●		●		PET Alexa Fluor 594*
ROX	575	602	82 000	632.78	●	●	●		●		Texas Red Alexa Fluor 594
Texas Red	583	603	116 000	818.00	●	●	●		●		ROX™ Alexa Fluor 594
Cy3.5	588	604	150 000	544.70	●				●		Alexa Fluor 594 CAL Fluor Red 610
LightCycler 610	590	610	n.a.	761.48	●	●	●		●		Alexa Fluor 594 CAL Fluor Red 610
ATTO 594	601	627	120 000	903.00	●	●	●		●		Alexa Fluor 594 CAL Fluor Red 610
DY-480 XL	500	630	50 000	612.68	●	●	●		●		
DY-610	610	630	80 000	743.00	●	●	●		●		Alexa Fluor 610
ATTO 610	615	634	150 000	488.00	●	●	●		●		Alexa Fluor
LightCycler 640	625	640	n.a.	824.68	●	●	●		●		
Bodipy 630/650	625	640	101 000	662.60	●	●	●		●		Alexa Fluor 633
ATTO 633	629	657	130 000	649.00	●	●	●		●		LIZ Alexa Fluor 633
Alexa Fluor 647	650	665	239 000	957.00	●	●	●		●		Cy5 Quasar 670
Bodipy 650/665	650	665	101 000	645.60	●	●	●		●		Cy5 Quasar 670
ATTO 647N	644	669	150 000	743.00	●	●	●		●		Cy5 Quasar 670
Cy5	649	670	250 000	470.63	●			●	●		Quasar 670 TYE 655
DY-649	655	674	250 000	942.00	●	●	●				Quasar 670
LightCycler 670	645	678	215 000	470.63	●				●		
Cy5.5	675	694	250 000	570.74	●				●		Alexa Fluor 680 TYE 705
ATTO 680	680	700	125 000	623.00	●	●	●		●		Alexa Fluor 680 Alexa Fluor 700
LightCycler 705	685	705	215 000	570.74	●				●		Quasar 705 Alexa Fluor 700
DY-682	690	709	140 000	906.00	●	●	●		●		IRDye 700 Quasar 705
ATTO 700	700	719	120 000	663.00	●	●	●		●		IRDye 700 Quasar 705
ATTO 740	740	764	120 000	565.00	●	●	●		●		Cy7 Alexa Fluor 740
DY-782	782	800	170 000	932.00	●	●	●		●		IRDye 800

Abs: Absorption = Peak excitation wavelength [nm]
 Em: Emission = Peak emission wavelength [nm]
 ε: Molar extinction coefficient [M⁻¹cm⁻¹]
 MW: Molecular weight [g/mol] of the dye labelled on the 3' and 5' end of an oligonucleotide. For internal labelling 279 g/mol needs to be added for the amino linker.