

# Properties of common fluorescence labels

Name	manufacturer/ supplier	absorption, max. [nm]	emission, max. [nm]	extinction [cm <sup>-1</sup> M <sup>-1</sup> ]	fluorescence lifetime [ns]	quantum efficiency
EDANS	*	334	490	6.100	13,6 (water)	*
Pyrene	*	340	376	43.000	382 (cyclohexane) 410 (ethanol)	*
DAPI	Molecular Probes	344	486,5	27.000	2 (water) 20 (conjugated to DNA)	0,043 (water) 0,58 (DMSO)
Hoechst 33258	Molecular Probes	345,5 (water) 352,5 (DMF)	507,5 (water) 486 (DMF)	46.000	3,5	0,034 (water) 0,35 (DMF)
AMCA	*	353	442	19.000	5,0 (water)	*
Atto 425	Attotec	390 (water)	479 (water)	24.000	3,8 (water)	0,9 (water)
SYBR Green II	Molecular Probes	492	513	*	*	*
Cy2™	Amersham	489	506	150.000	*	*
Alexa Fluor 488	Molecular Probes	495	519	65.000	4,1	*
Fluorescein	*	495	521	86.000	4,0 (0,01M NaOH)	0,95
Chromleon P503	Chromleon	503	600	24.000	0,1 (water) 2,8 (conj. to HSA)	< 0,01 (free molecule) up to 0,5
Bodipy®FL	Molecular Probes	504	513	68.000	5,7 (methanol)	*
Atto 520	Attotec	521	548	110.000	4,0	0,9
Rhodamine 6G	*	530	552	116.000	4,0 (water) 3,9 (ethanol)	0,95 (ethanol)
Rhodamine B	*	543	565	106.000	2,85 (ethanol)	0,65 (basic ethanol) 0,49 (ethanol)
Chromleon 546	Chromleon	545	561	110.000	0,1 (water) 0,4 (conjugated to Biotin) 0,9 (conj. to Streptavidin)	0,08 (free label) 0,11 (conjugated to HSA)
TAMRA , 5-isomer	*	546	579	91.000	2,3	*
Cy3™	Amersham	550	570	150.000	0,3	0,04 >0,15 (labeled protein D/P=2)
Oyster® - 556	Biolabels	565 (ethanol) 556 (PBS)	581 (ethanol) 570 (PBS)	155.000	*	0,3 (ethanol) 0,2 (PBS)

# Properties of common fluorescence labels

Name	manufacturer/ supplier	absorption, max. [nm]	emission, max. [nm]	extinction [cm <sup>-1</sup> M <sup>-1</sup> ]	fluorescence lifetime [ns]	quantum efficiency
<b>Cy3B™</b>	Amersham	558 (als NHS-Ester)	572 (als NHS-Ester)	130.000	2,8 ns	0,67(NHS-Ester)
<b>Rose Bengal</b>		559	571	90.400	0,8 (EtOH) 0,6 (MeOH) 0,1 (water)	0,05 (EtOH)
<b>Atto 565</b>	Attotec	561 (water)	585 (water)	120.000	3,4 (water)	0,92 (water)
<b>Atto 610</b>	Attotec	612	640	150.000	3,0	0,7
<b>Bodipy® 630/650</b>	Molecular Probes	629 (water) 628 (ethanol) 633 (0,05 % Tween)	646 (water) 643 (ethanol) 648 (0,05 % Tween)	100.000	3,9 (water) 4,4 (ethanol) 5,0 (0,05 % Tween)	*
<b>Evoblue™ 30</b>	Evotec	635	670	100.000	0,7	*
<b>Dy 635</b>	Dyomics	634	664	*	0,4 (free) 2,6 (BSA bound)	*
<b>Bodipy® 650/670</b>	Molecular Probes	646	660	100.000	2,7	*
<b>Cy5™</b>	Amersham	646	664	250.000	0,8	0,27 >0,28 (labeled protein D/P=2)
<b>DyLight 647</b>	Pierce	647	673	250.000	*	0,28 (NHS-Ester) 0,15 (an Goat Anti-Mouse)
<b>Alexa Fluor 647</b>	Molecular Probes	649 (water) 655 (ethanol) 649 (0,05 % Tween)	666 (water) 674 (ethanol) 665 (0,05 % Tween)	239.000	1,0 (water) 1,5 (ethanol) 1,0 (0,05 % Tween)	*
<b>Oyster® - 645</b>	Biolabels	651 (ethanol) 645 (PBS)	669 (ethanol) 666 (PBS)	250.000	*	0,4 (ethanol) 0,25 (PBS)
<b>Atto 650</b>	Attotec	653	680	125.000	4,0	0,5
<b>Cy5.5™</b>	Amersham	675	694	250.000	0,8 (water)	0,23 (NHS-Ester)
<b>Cy7™</b>	Amersham	748	767	250.000	*	0,28 (NHS-Ester)
<b>Dy 780</b>	Dyomics	782	800	102.000	*	*
<b>ChromeonRulabel</b>	Chromeon	458	637	*	400 ns – 5 µs	*
<b>EGFP</b>	Clontech	488	509	*	3,2	0,6
<b>DsRed</b>	Clontech	532	583	*	3,65	0,7

April 2005, subject to change, no claim of completeness, no liability for correctness