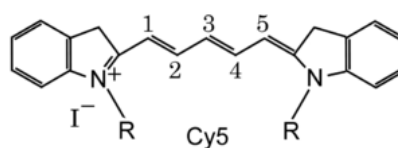
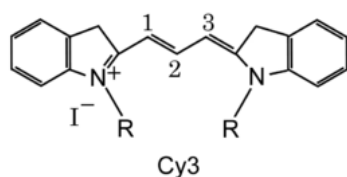


ANNEXE

Les fluorophores organiques

1) Les Cyanines¹

Structure d'une Cyanine :



| CyDye | Molecular weight | Abs.max (nm) | Em.max (nm) | Lifetime (ns) | Quantum yield | Molar extinction coefficient (M ⁻¹ cm ⁻¹) |
|-------|------------------|--------------|--|---------------|---------------|--|
| Cy3 | 765.9 | 548 | 562 | <0.3 | 0.04* | 150 000* |
| Cy3B | 658 | 558 | 572 | 2.8 | 0.7 | 130 000 |
| Cy3.5 | 1102.4 | 581 | 596 | 0.5 | 0.14† | 120 000† |
| Cy5 | 791.9 | 646 | 664 | 1.0 | 0.27* | 250 000* |
| Cy5.5 | 1128.4 | 673 | 692 | 1.0 | 0.23† | 190 000† |
| Cy7 | 818 | 747 | 774 | - | 0.28 | 200 000 |
| Cy5Q | 907 | 644 | * Mujumdar, R.B., et al, Bioconjugate Chem. 4, 105-111 (1993). † Mujumdar, R.B., et al, Bioconjugate Chem. 7, 356-362 (1996). | | | |
| Cy7Q | 933 | 739 | | | | |

¹ www.amershambiosciences.com

1) Les AlexaFluor²

| | Couleur | Abs. (nm) | Em. (nm) | MM (g/mol) | ϵ ($\text{cm}^{-1}\text{M}^{-1}$) | ϕ |
|-----------------|--------------|--------------|-------------|---------------|---|--------|
| Alexa Fluor 350 | blue | 346 | 442 | 410 | 19,000 | - |
| — 405 | violet | 401 | 421 | 1028 | 34,000 | - |
| — 430 | green | 434 | 541 | 702 | 16,000 | - |
| — 488 | cyan-green | 495 | 519 | 643 | 71,000 | 0.92 |
| — 500 | green | 502 | 525 | 700 | 71,000 | - |
| — 514 | green | 517 | 542 | 714 | 80,000 | - |
| — 532 | green | 532 | 554 | 721 | 81,000 | 0.61 |
| — 546 | yellow | 556 | 573 | 1079 | 104,000 | 0.79 |
| — 555 | yellow-green | 555 | 565 | ~1250 | 150,000 | 0.1 |
| — 568 | orange | 578 | 603 | 792 | 91,300 | 0.69 |
| — 594 | orange-red | 590 | 617 | 820 | 90,000 | 0.66 |
| — 610 | red | 612 | 628 | 1172 | 138,000 | - |
| — 633 | red | 632 | 647 | ~1200 | 100,000 | - |
| — 647 | red | 650 | 665 | ~1300 | 239,000 | 0.33 |
| — 660 | red | 663 | 690 | ~1100 | 132,000 | 0.37 |
| — 680 | red | 679 | 702 | ~1150 | 184,000 | 0.36 |
| — 700 | red | 702 | 723 | ~1400 | 192,000 | 0.25 |
| — 750 | red | 749 | 775 | ~1300 | 240,000 | 0.12 |

Abs = absorption maximale

Em = émission maximale

MM = masse molaire

ϵ = coefficient d'extinction molaire

ϕ = rendement quantique

² www.invitrogen.com

2) Les ATTO dyes³

| Dye | Abs. (nm) | Em. (nm) | ϵ ($M^{-1}cm^{-1}$) | ϕ |
|-----------|--------------|-------------|-----------------------------------|--------|
| ATTO 390 | 390 | 479 | 24,000 | 0,9 |
| ATTO 425 | 436 | 484 | 45,000 | 0,9 |
| ATTO 465 | 453 | 508 | 75,000 | 0,55 |
| ATTO 488 | 501 | 523 | 90,000 | 0,8 |
| ATTO 495 | 495 | 527 | 80,000 | 0,45 |
| ATTO 520 | 516 | 538 | 110,000 | 0,9 |
| ATTO 532 | 532 | 553 | 115,000 | 0,9 |
| ATTO 550 | 554 | 576 | 120,000 | 0,8 |
| ATTO 565 | 563 | 592 | 120,000 | 0,9 |
| ATTO 590 | 594 | 624 | 120,000 | 0,8 |
| ATTO 594 | 601 | 627 | 120,000 | 0,85 |
| ATTO 610 | 615 | 634 | 150,000 | 0,7 |
| ATTO 611X | 611 | 681 | 100,000 | 0,35 |
| ATTO 620 | 619 | 643 | 120,000 | 0,5 |
| ATTO 633 | 629 | 657 | 130,000 | 0,64 |
| ATTO 635 | 635 | 659 | 120,000 | 0,25 |
| ATTO 637 | 635 | 659 | 120,000 | 0,25 |
| ATTO 647 | 645 | 669 | 120,000 | 0,2 |
| ATTO 647N | 644 | 669 | 150,000 | 0,65 |
| ATTO 655 | 663 | 684 | 125,000 | 0,3 |
| ATTO 665 | 663 | 684 | 160,000 | 0,6 |
| ATTO 680 | 680 | 700 | 125,000 | 0,3 |
| ATTO 700 | 700 | 719 | 120,000 | 0,25 |
| ATTO 725 | 729 | 752 | 120,000 | 0,1 |
| ATTO 740 | 740 | 764 | 120,000 | 0,1 |

Abs = absorption maximum

Em = émission maximum

ϵ = coefficient d'extinction molaire

ϕ = rendement quantique

³ <http://www.atto-tec.com>