

Selection of excitation lasers and emission filters

You came for a research stay into a renowned foreign laboratory. A principal investigator showed you all instrumentation. When showing fluorescence scanner for detection of electrophoretic gels, he asked you to write down equipment that you would need for your experiments. As you will use fluorophore **A**, you need to find out whether it is possible to excite and selectively detect fluorescence of your fluorophore.

Excitation wavelengths of lasers installed are: 473 nm, 532 nm, 635 nm.
Installed long-pass emission filters are 510 LP, 575 LP, 665 LP.

1. Which laser would you chose for excitation of your fluorophore?
2. What laser would you order to obtain maximal excitation and maximal intensity of fluorescence of your fluorophore?
Please, select the nearest laser which is available in [SpectraViewer](#) application in Light Sources.
3. Which of installed long-pass filters would be suitable for the detection of your fluorophore?
4. What band-pass filter would you order for optimal detection of your fluorophore? Please, write mean wavelength dash band width (e.g. 530/20).

To see spectral characteristics of your fluorophore and to select suitable emission filter and design band-pass filter use SpectraViewer application
<http://www.invitrogen.com/site/us/en/home/support/Research-Tools/Fluorescence-SpectraViewer.html>

Instructions: Chose your flurophore. Insert a suitable available laser in Light Sources by selecting Custom. Enter laser wavelength value. Show a suitable filter in Emission Filters by selecting Custom. Enter filter wavelength value. In Badwidth enter LP for longpass filter or filter range in nanometers for bandpass filter.

Fluorophore **A** can be found in the table next to your name.

Please send me your short answers via email within 48 hours.

A correct answer = 0.5 point

		A
1	Dikunová Alžbeta	FITC (Fluorescein)
2	Dzurov Matej	ROX (carboxy X rhodamine)
3	Faturová Jana	Acridine Orange
4	Gašparik Norbert	GFP (emerald GFP)
5	Hesko Ondrej	Lucifer Yellow
6	Jahodová Kateřina	Ethidium Homodimer
7	Kameniarová Michaela	Pacific Green
8	Konečná Kateřina	JOE
9	Korytářová Anna	Alexa Fluor 488
10	Kozeleková Aneta	Cy3
11	Kubinyiová Lenka	Oregon Green 514
12	Kůřilová Eliška	Cyanine5
13	Lysáková Klára	SYBR Green
14	Mikšátková Barbora	Red Fluorescent Protein (RFP)
15	Nováková Barbora	TOTO-3
16	Prabhullachandran Unnikannan	Alexa Fluor 594
17	Procházková Markéta	BOBO-1
18	Šimek Jan	Sypro Orange
19	Tužinčin Dávid	TOTO-1