

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 also maximal intensity of fluorescence of your fluorophore?
Please, select the nearest laser which is available in [SpectraViewer](#) application.
3. Which of installed band-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 design of band-pass filter, use SpectraViewer application

<http://www.invitrogen.com/site/us/en/home/support/Research-Tools/Fluorescence-SpectraViewer.html>

Note: For launching of the application is necessary to have [Java](#) installed in your web browser.

Click on **Toggle Excitation Display**” for actualization of your spectra and filter display.

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

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

Correct answer = 0.5 point

		A
1	Bencúrová, Petra	Fluorescein (antibody conjugate)
2	Dabravolski, Siarhei	5 ROX (carboxy X rhodamine)
3	Dubec, Vít	Acridine Orange
4	Dudová, Zdenka	GFP
5	Dvořák, Jan	Lucifer Yellow
6	Fabišik, Matej	5 FAM (carboxyfluorescein)
7	Fedorko, Jan	6 JOE
8	Fialová, Martina	AlexaFluor 488 (oligo conjugate)
9	Holek, Michal	Cy3 dye (antibody conjugate)
10	Kočka, Martin	Oregon Green 514 (antibody conjugate)
11	Míka, Matěj	Cy5 dye (antibody conjugate)
12	Obacz, Joanna Agnieszka	Propidium iodide
13	Partyka, Jan	YOYO-1
14	Přikrylová, Terézia	SYBR Green-1
15	Rájecký, Michal	YFP
16	Reichman, Pavel	SYBR Gold
17	Sochorová, Jana	FITC (antibody conjugate)
18	Škubník, Karel	SYPRO Ruby
19	Tylichová, Zuzana	RFP