

# Protocol for laboratory work 3.7.1.

## Monochromator

Students: 1. Romāns P.

2.

### Appointments:

- ✓ 1. Graduate the monochromator by using source with known (mercury or neon) spectrum.
- ✓ 2. Determine by using monochromator and the corresponding graduation curve, the wavelengths of brightest lines of given source.
- ✓ 3. Compare defined wavelengths with an etalon spectrum.
4. Compare experimentally defined wavelengths with theoretically calculated.

### Used measuring devices and set-up

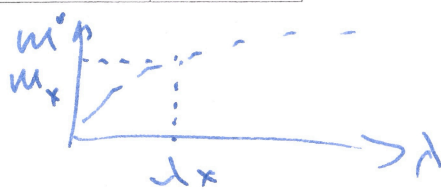
Nr.	Title	Type, number	Measuring diapason	The value of smallest scale
1.	Spectrometer	YM-2	0-3500°	2°

### Measured data

#### Graduation:

Source of the light:  $H_2$

	$\lambda$ , nm	$m$ , °		colour	$m$ , °
1.	404.7	1014	$\Delta 64^\circ$ +++ $\Delta 68^\circ$	1. VIO	1860°
2.	407.8	1078		2. VIO	1928°
3.	433.9	1542		3. B	2178°
4.	434.7	1554	$\Delta 30^\circ$ +- $\Delta 134^\circ$	4. B	2246°
5.	435.8	1572		5. B	2312°
6.	491.6	2236	?	6. CYAN	2520°
7.	496.2	2248		7. G	2696°
8.	512.1	2340		8. Y	2858°
9.	546.1	2662	+++	9. Y	2894°
10.	567.6	2796	+-	10. ORANGE	2958°
11.	577.0	2840		11. ORANGE	3008°
12.	579.0	2856		12. R	3046°
13.	607.3	2994	++	13. R	3080°
14.	612.3	3112	+++	14.	
15.	623.6	3058		15.	
16.	671.6	3232	???	16.	
17.	690.7	3292		17.	
18.				18.	



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