

# UM-SJTU PHYSICS LABORATORY VP241

## DATA SHEET (EXERCISE 2)

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Group: 11

Date: 30.10.2024

**NOTICE.** Please remember to show the data sheet to your instructor before leaving the laboratory. The data sheet will not be accepted if the data are recorded with a pencil or modified with a correction fluid/tape. If a mistake is made in recording a datum item, cancel the wrong value by drawing a fine line through it, record the correct value legibly, and ask your instructor to confirm the correction. Please remember to take a record of the precision of the instruments used. You are required to hand in the original data with your lab report, so please keep the data sheet properly.

$U_S$ [V] $\pm$ _____ [V]	$U_0(I_M = 0)$ [V] $\pm$ _____ [V]	$U(I_M = 250 \text{ mA})$ [V] $\pm$ _____ [V]
<u>5</u>	<u>2.496</u>	<u>2.617</u>

Table 1. Data for  $U_0$  and  $U$  with  $U_S = 5 \text{ V}$ .

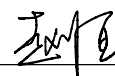
	$U_S$ [ ] $\pm$ _____ [ ]	$U_0$ [ ] $\pm$ _____ [ ]	$U$ [ ] $\pm$ _____ [ ]
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
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14			
15			
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Table 2. Data for  $U_0$  and  $U$  with different  $U_S$ .

Instructor's signature: 王恺轩

	$I_M$ [mA] $\pm$ _____ [mA]	$U$ [mV] $\pm$ _____ [mV]
1	0	0.16
2	50	23.5
3	100	44.5
4	150	66.1
5	200	89.6
6	250	112.7
7	300	135.5
8	350	155.4
9	400	178.4
10	450	200.3
11	500	223.4

Table 3. Measurement data for the  $I_M$  vs.  $U$  relation.

Instructor's signature: 

	$x$ [cm] $\pm$ _____ [cm]	$U$ [mV] $\pm$ _____ [mV]		$x$ [cm] $\pm$ _____ [cm]	$U$ [mV] $\pm$ _____ [mV]
1	2	51.35	27	28	60.17
2	3	79.99	28		
3	4	95.59	29		
4	5	102.96	30		
5	6	106.38	31		
6	7	108.62	32		
7	8	109.59	33		
8	9	110.13	34		
9	10	110.39	35		
10	11	110.66	36		
11	12	110.70	37		
12	13	110.65	38		
13	14	110.64	39		
14	15	110.83	40		
15	16	110.77	41		
16	17	110.51	42		
17	18	110.33	43		
18	19	110.13	44		
19	20	110.45	45		
20	21	110.12	46		
21	22	109.62	47		
22	23	108.73	48		
23	24	107.38	49		
24	25	104.58	50		
25	26	99.12	51		
26	27	86.63	52		

Table 4. Data for the  $U$  vs.  $x$  relation.

Instructor's signature: 