

Horizontal Electrophoresis of Nucleic Acids

ETHIDIUM BROMIDE adsorbs UV-rays at **260, 302** or **360 nm** and emits at **590 nm**.

302 nm is the recommended wavelength.

Sensitivity: **5 ng in a 4,5 mm wide well**.

Avoid "smear" or "trailing": **< 200 ng (4,5 mm wide well)**.

Maximum voltage maintaining inverse proportionality between molecular weight and mobility (\log_{10}): **5 volts/cm**.

Agarose concentration for an effective separation

Agarose %	Linear DNA size (range in bp)
0.3	60,000 - 5,000
0.6	20,000 - 1,000
0.7	10,000 - 800
0.9	7,000 - 500
1.2	6,000 - 400
1.5	4,000 - 200
2.0	3,000 - 100

MARKERS DNA "V"
250 ng/μL

Band bp	1 μl	2 μl	3 μl	4 μl	5 μl	10 μl
587	34	68	102	136	170	340
540	31	62	93	124	155	310
504	29	58	87	116	145	290
458	26	52	78	104	130	260
434	25	50	75	100	125	250
267	15	30	45	60	75	150
234	13	26	39	52	65	130
213	12	24	36	48	60	120
192	11	22	33	44	55	110
184	10	20	30	40	50	100
124	7	14	21	28	35	70
123	7	14	21	28	35	70
104	6	12	18	24	30	60
89	5	10	15	20	25	50
80	5	10	15	20	25	50
64	4	8	12	16	20	40
57	3	6	9	12	15	30
51	3	6	9	12	15	30
21	1	2	3	4	5	10
18	1	2	3	4	5	10
11	1	2	3	4	5	10
8	0,5	1	1,5	2	2,5	5
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