Lab Notebook Template

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1 Works for me

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DISCLAIMER:

GEL ELECTROPHORESIS 2 : 1 KB GEL-BASED ASSAY

OBJECTIVES

- To visualize a 1 kilobase DNA ladder using a 1% agarose/0.5X TBE gel using Bento Lab.
- Test DNA staining by Gelgreen when caste in the gel using different amounts of DNA
- Practice gel electrophoresis skills.
- Practice laboratory notebook entries.

METHODS

1. Casting a 1% agarose gel.
   - Follow protocol "Agarose Gel Protocol " written by Dr. Akeson, with the following exceptions if any

2. Preparing the 1 kb DNA ladder samples. Samples are 0.5, 1.0, 2.0, 5.0 ug of NEB ladder. Combine as follows in cheap Eppendorf tubes.

ug DNA	ul NEB ladder	ul 6X loading buffer	water ul	total volume (uL)
0.5	1	2	9	12
1.0	2	2	8	12
2.0	4	2	6	12
5.0	10	2	0	12

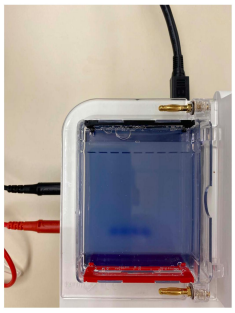
3. Preparing the gel (See Dr. Akeson's gel protocol noted in 1 above)

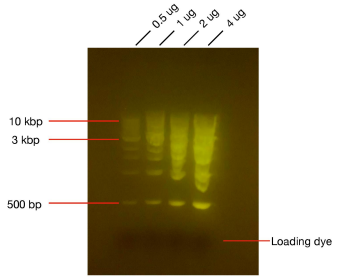
4. Loading the sample
   - Gel was placed on the Bento Box transilluminator taking care not to spill running buffer. Sample was loaded into lanes 3, 4, 5, and 6.

5. Running the gel.
   - Standard Bento Lab protocol, i.e. 50V for one hour

RESULTS

1. Gel was visualized at 20 minutes. All lanes visible. 1.0 to 5.0 ug clearly overloaded.





20 Oct 20. NEB 1kb ladder. 1% agarose, 0.5X TBE, 50 V 1 hour. Lanes are 1kb DNA ladders at different total masses. Gel stain was Gelgreen pre-caste in the gel at 1:10,000 of gel volume.

CONCLUSION

- 0.5 ug lane was fine but not superb. Larger bands diffuse.
- Loading 1 ug or more DNA caused severe streaking due to lane overload