

LAB 4 RESOURCES

ATTENTION TEACHERS:

Please have your students know how to use a pipette before proceeding to do this lab!

LAB 4A KIT ITEMS	LABELS	VOLUMES
P-20 micropipette		--
P-20 pipette tips		--
Agarose		1.2g agarose to 150mL dH ₂ O
Microfuge tubes (Solution #2)	5X LD	--
Electrophoresis chambers		--
UV Transilluminator		--
Light box/ amber filter		--
Gel trays/combs		--
Spatula		--
*Sybr Safe (vial and bottle)	Sybr Safe	Add 15ul to 150ml of melted agarose
FREEZER BOX ITEMS		
Marker/ 1kb ladder	DNA Marker	--

Notes: *See Lab 2A notes

Let gel run for approximately 30-40 minutes, make sure to check on the gel after 30 minutes to make sure it doesn't run off.

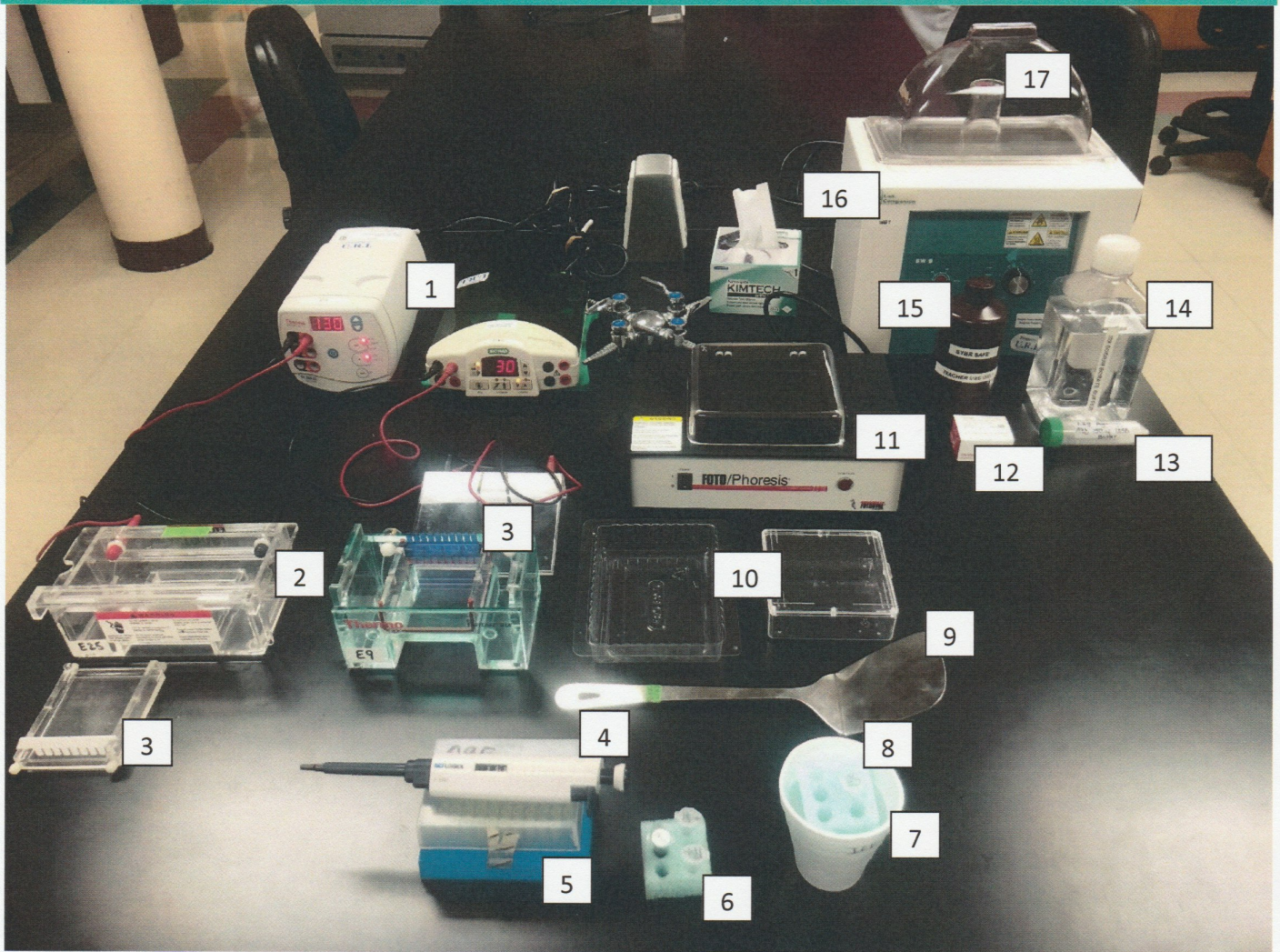
Diluting 20x SB Buffer to 1x SB buffer---- Mix 9mLs of 20x SB Buffer with 171 mLs of deionized water
You can find this in the ABE Teacher Guide on page OV-30

P-20, P-200, and P-1000 pipettes may contain locks on them: Please **UNLOCK** the pipette when adjusting the measurement

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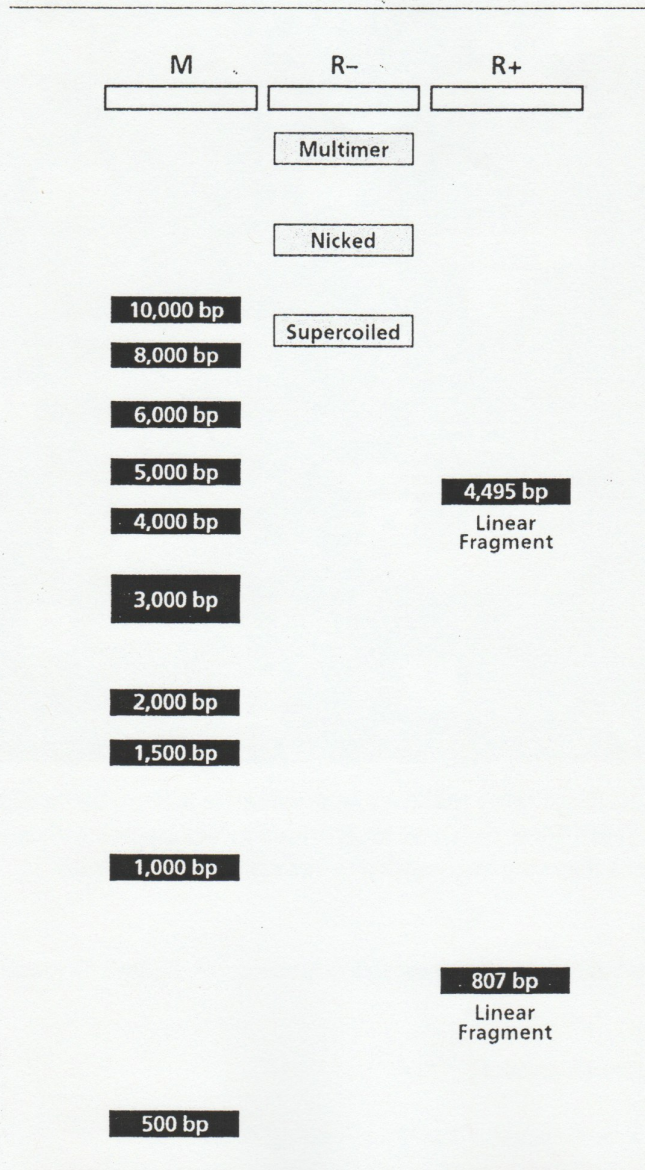
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Lab 4A

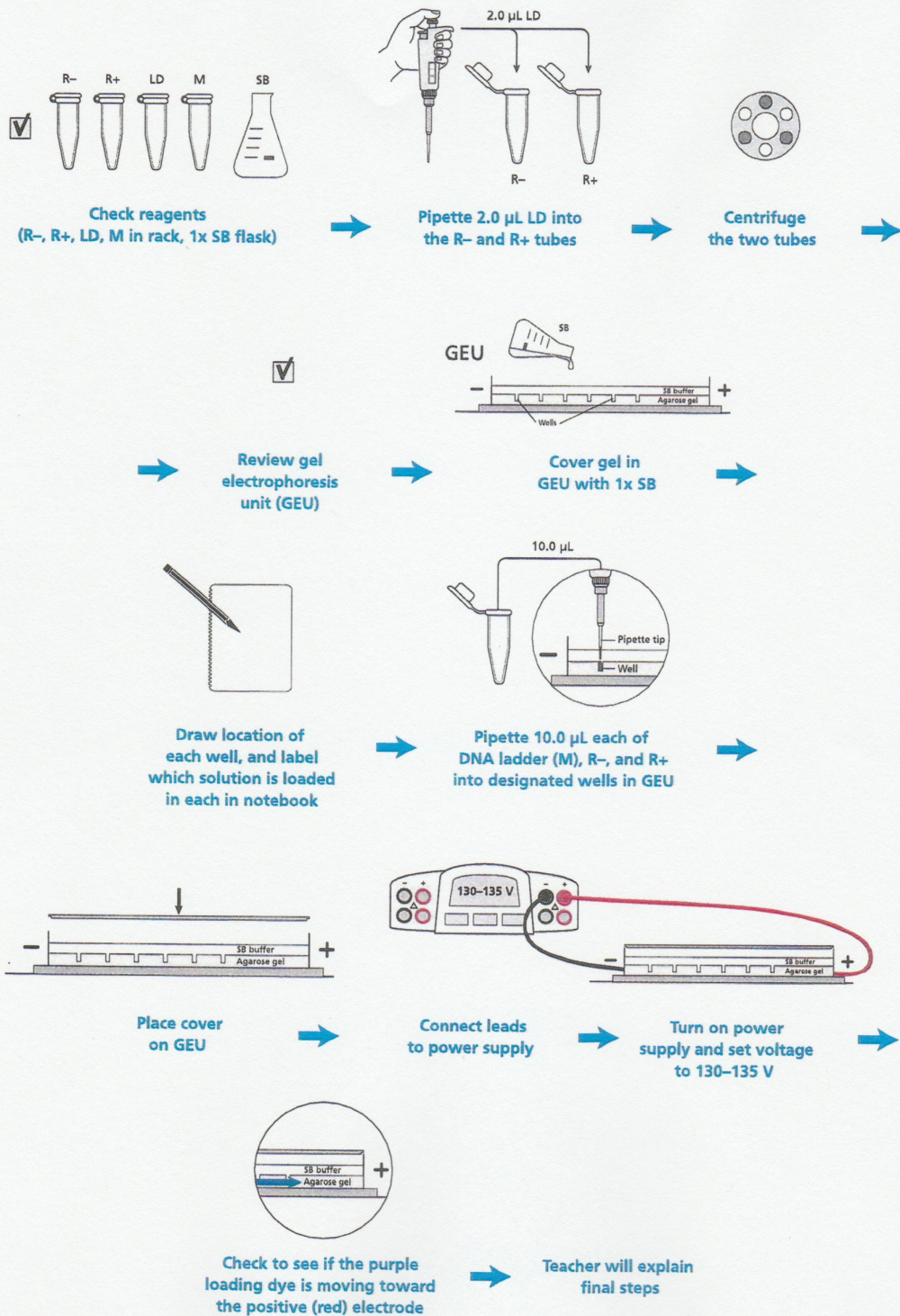


1. Electrophoresis power packs (both types that may be provided in kits are being displayed)
2. Electrophoresis chambers (both types that may be provided in kits are being displayed)
3. Trays and combs (both types that may be provided in kits are being displayed)
4. P2-20 micropipette
5. P20-200 micropipette tips
6. Green float tube holder- should be used to hold tubes labeled: **R+**, **R-**, and **5x loading dye (LD)**; it is the same as Sol. 2.
7. Ice cup
8. Tubes that should be on ice: **1Kb Ladder**
9. Spatula
10. Gel trays (both types that may be provided in kits are being displayed)
11. UV trans illuminator
12. SybrSafe tube
13. 1.2g of agarose tube
14. 20x SB buffer
15. SybrSafe Post Stain Bottle
16. Water bath
17. Hot agarose in a flask should be placed in water bath to cool down (make sure to set water bath to **55-60°**)

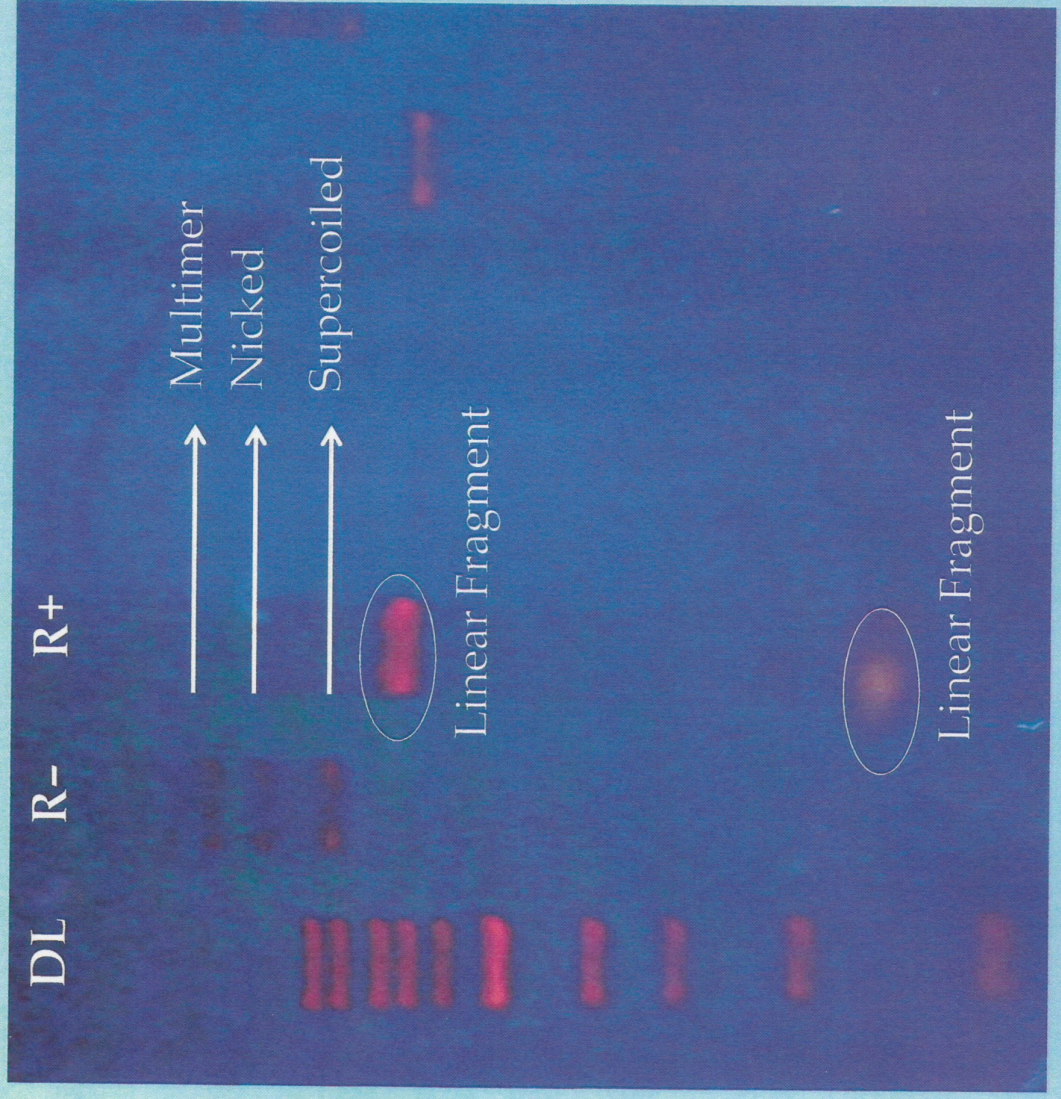
LAB 4A DNA LADDER DIAGRAM

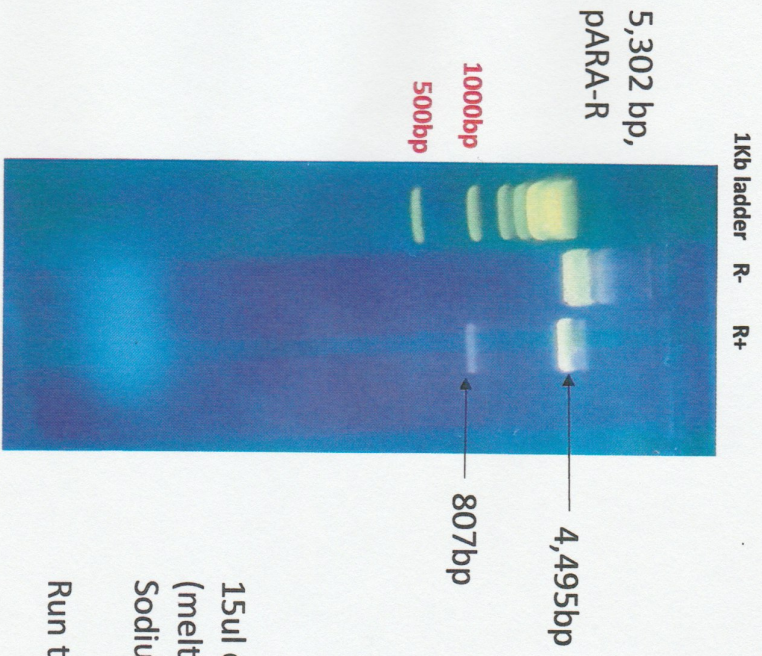


Laboratory 4A Flowchart



Lab 4A Gel Results





15ul of sybrsafe to 150ml of
(melted) 8% agarose gel in 1X
Sodium Borate Buffer

Run time: 40 minutes