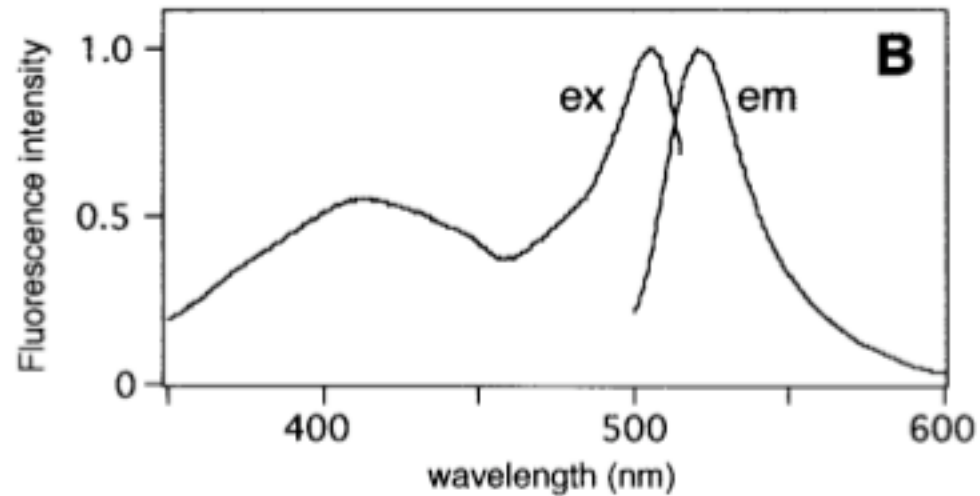
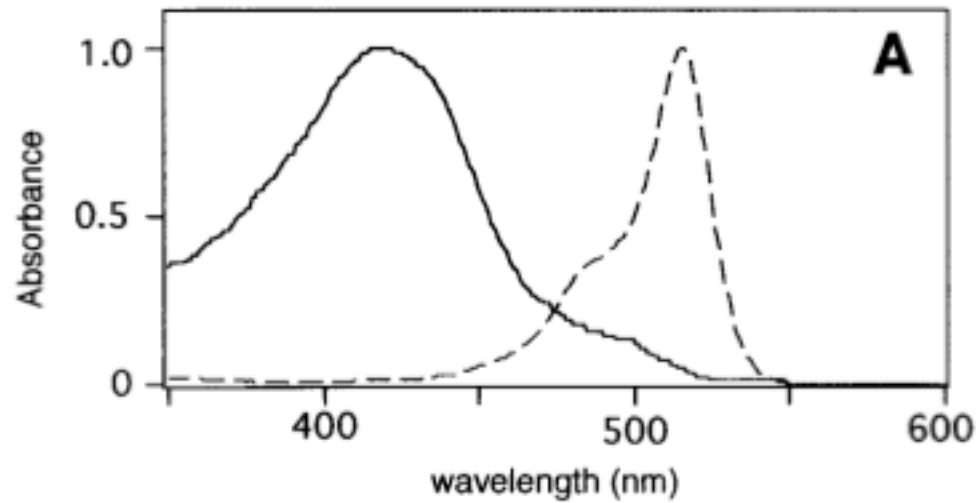


- Announcements → lab report return
- Quiz
- Pre-lab Lecture
 - ❖ Gel electrophoresis (cont)
 - ❖ Bacterial transformation
 - ❖ Today in Lab: M2D3

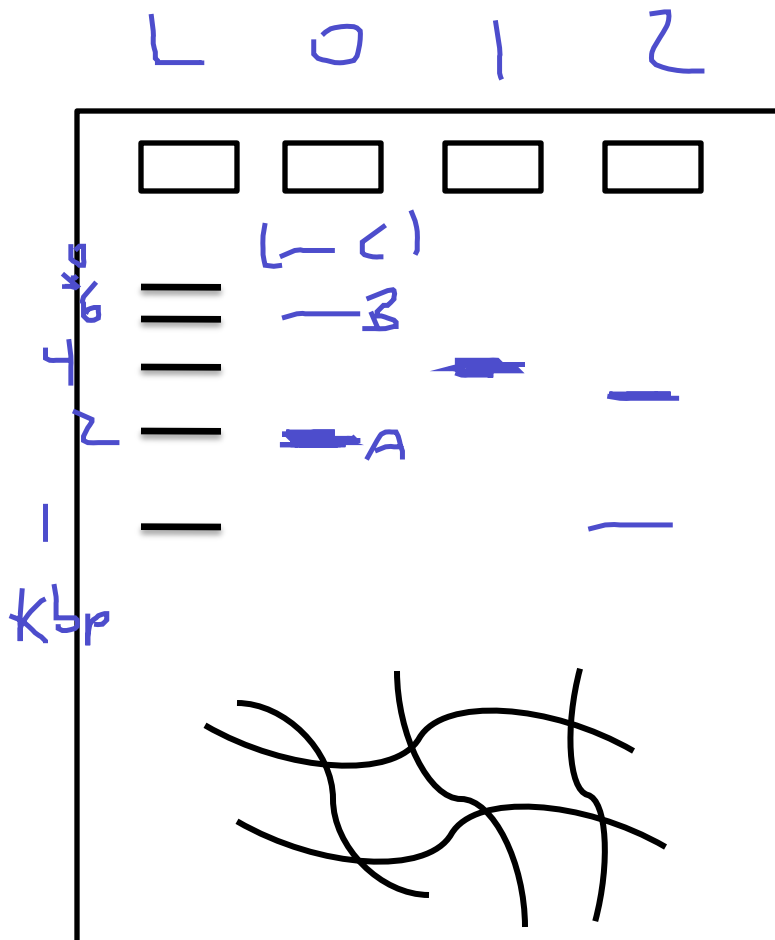
How are ex/em spectra measured?



Polymerase error rates

- *Taq* polymerase ~ 1 in 10^5 ~~≠~~ $\hookrightarrow p$
 - Standard version has no proofreading capability
 - \hookrightarrow exonucleases
- *Pfu* polymerase ~ 1 in 10^6
 - Standard version requires longer extension times

DNA EP: Shape-dependence



Plasmid versus linear samples

↳ ex. 4 kbp plasmid

linear DNA (1.5x) runs w/ ladder

Restriction-digested, 2-cut runs to 4 kbp

Uncut plasmid

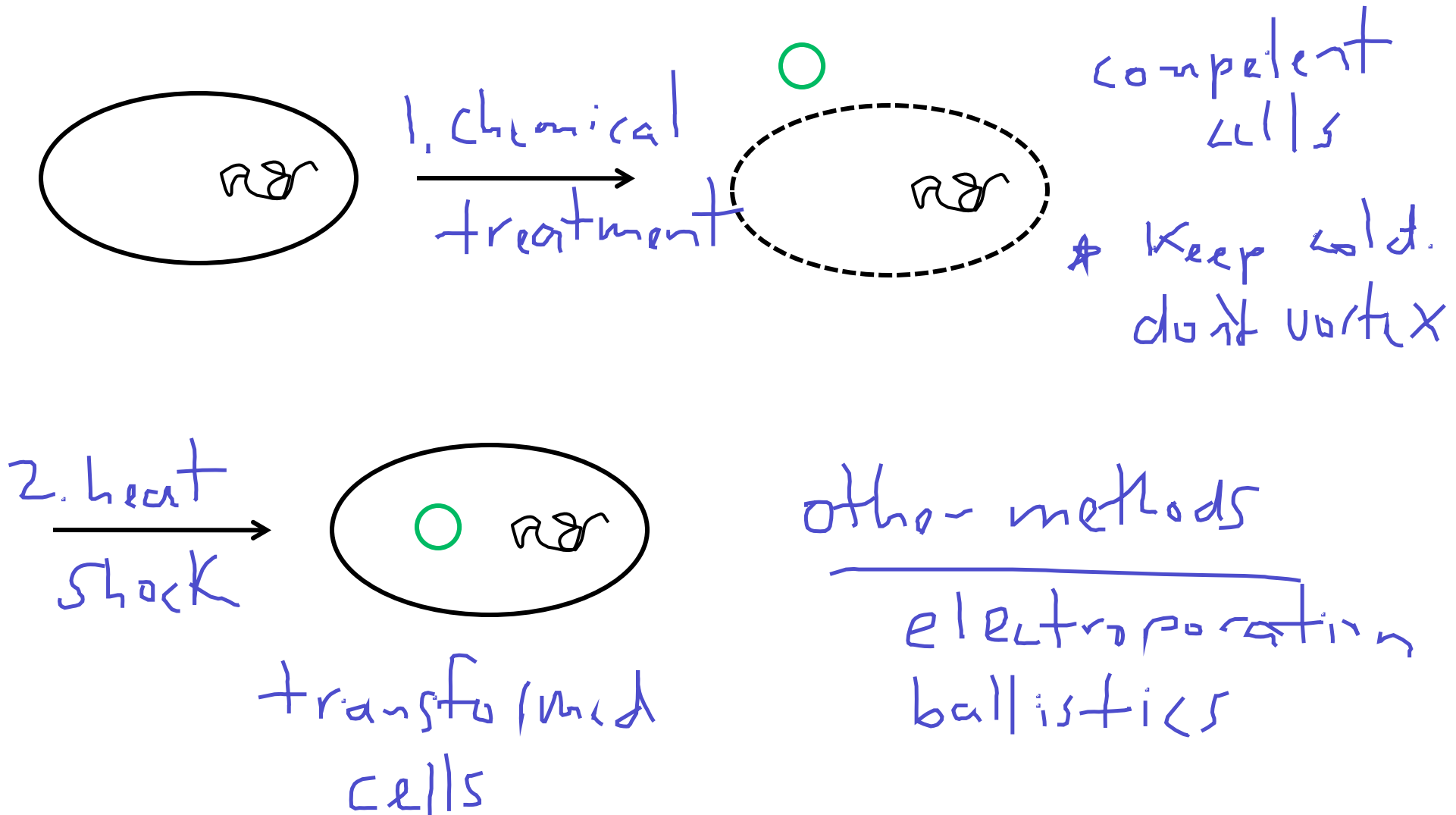
A Supercoiled- faster

B Relaxed or nicked circular- slower

↳ Plus high MW concatemers

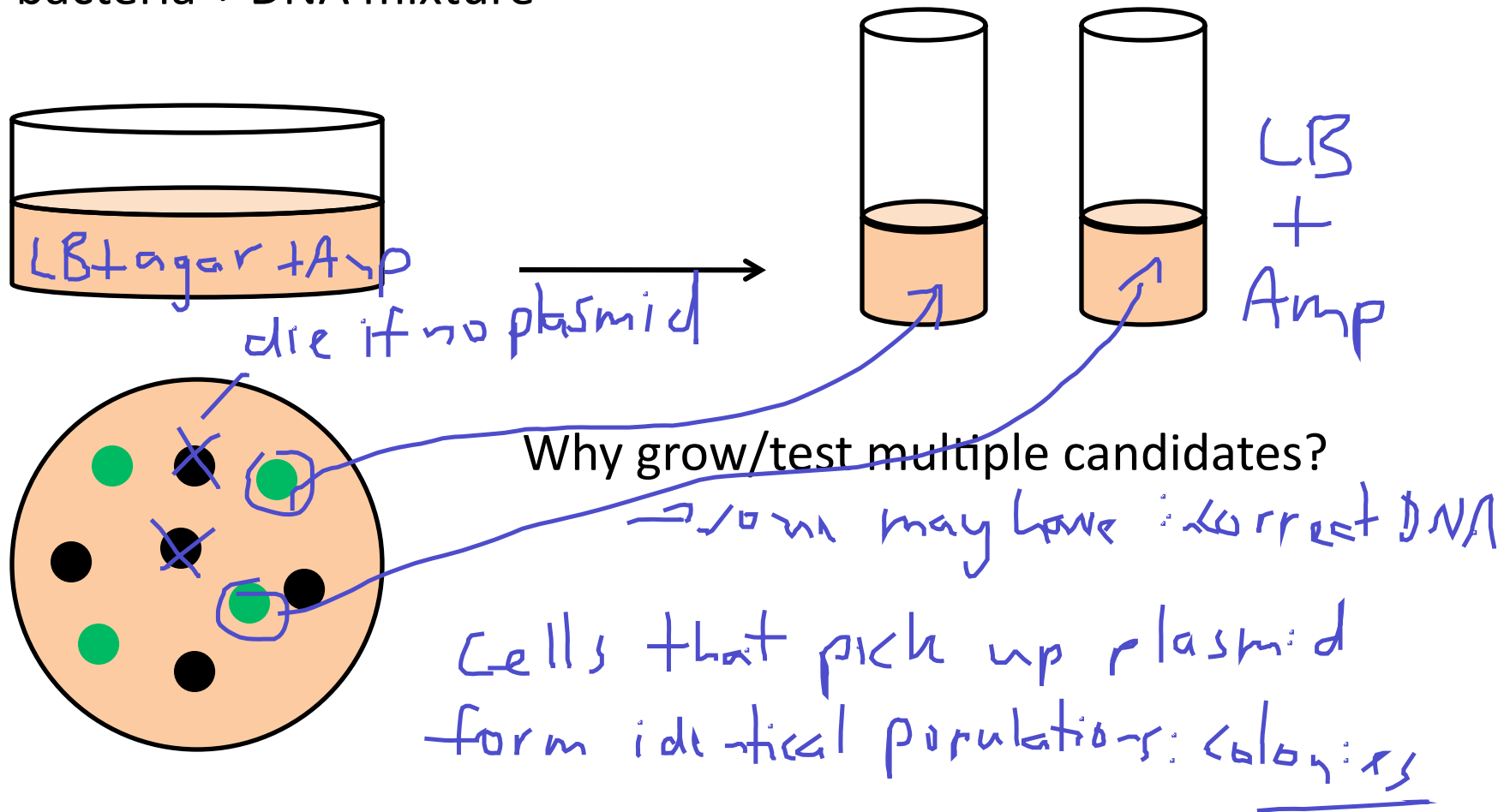
Remember to wear **nitrile** gloves.

Bacterial transformation



DNA Amplification in Bacteria

Plate bacteria + DNA mixture



Today in Lab: M2D3

- Set up gel of digested SDM product
 - mark your area with colored tape
 - runs 45 min, we will photograph and post it
- Meanwhile...
 - label tubes two ways (sticker top, marker side)
 - practice analysis
 - start FNT
- Briefly analyze gel for DNA size and amount
- Finally, bacterial transformation – be gentle!