

For Next Time

1. Protein gels are often called “SDS-PAGE” which stands for “SDS-polyacrylamide gel electrophoresis.” Please re-read the description of protein gels in the introduction to today’s experiment then define in a sentence or two the reasons for the “SDS” “polyacrylamide gel” and “electrophoresis” parts of the name.
2. Sketch what you expect your protein gel to look like if the addition of IPTG causes 50% of the protein content to be beta-galactosidase.
3. Compare the beta-galactosidase assay we performed today with the one described on OWW at Beta-Galactosidase Assay (A better Miller). List at least three experimental differences and suggest what these changes might give rise to.
4. Prepare a table of beta-galactosidase units associated with each sample, showing the values for each replicate and the average. Are you showing the units of the 1:10 dilution of cells or the cells themselves (you should do the latter)? What do the units tell you about the induction? What can you tell about the effect of the unnatural amino acid on the enzyme’s activity?