Protocol:

1. The teaching staff will demonstrate how to stabilize one’s hands when loading the gel. It is important to place the pipet tip vertically just inside the top of the well, but not too far down, because the tip can puncture the bottom of the gel, causing the sample to leak out (Figure 1).

A

B

C

D

1. Practice loading liquid into wells. Holding the pipettor vertically, or nearly so, place the end of a tip containing blue practice solution under the surface of the TAE buffer and within a well on the gel (Figure 4A). Then slowly press the plunger to the first stop. Wait a few seconds for the sample to settle into the well; then, lift the pipet tip out of the liquid, while still holding the plunger at the first stop. Do not push the plunger to the second stop; doing so will introduce bubbles and may push your sample back out of the well.

**Figure 1.** Tip positioning for loading samples into wells on an agarose gel. Panel **A** illustrates correct positioning of the tip, while panels **B**-**D** illustrate common errors. (**A**) The end of the tip containing sample is below the surface of the buffer (wavy line) and approximately in the middle of the rectangular well. Puncturing the side (**B**) or bottom (**C**) of the well or pipetting sample before the end of the tip is fully within the well (**D**) can all result in the loss of sample.