

Analysis of Protein

CHIBA University

Protocol for acrylamid gel electrophoresis

<samples in a test tube>

- 1.molecular weight maker, 2. albumin, 3. collagen, 4. Mixture of albumin and collagen,
- 5. unknown sample (albumin or collagen)

<Equipment>

- Pipets Tips Electrophoresis chamber Power supply module
- Plastic container Trash can Water bath 1.5ml test tube

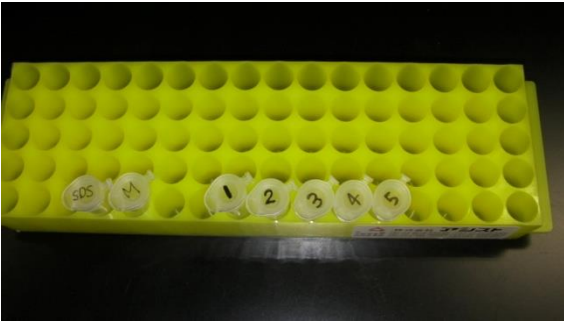
<Reagent>

- Electrophoresis buffer Protein staining solution Water
- cPagel precast gel (acrylamid gel)

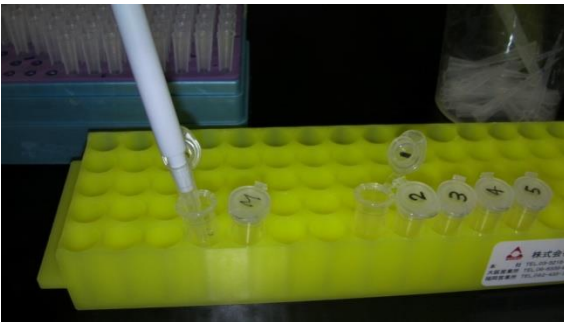
*** Caution: Acrylamid gel contains a small amount of neural toxin and a carcinogenic reagent. Always wear gloves, eye goggles, and a lab coat to avoid skin contact with reagents.**

- Lamelai sample buffer

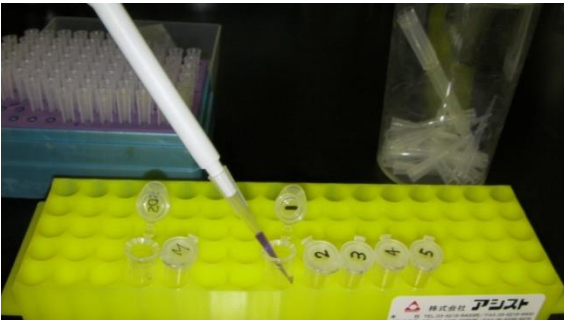
Prior to start experiment, please read this protocol and understand all procedures.



Check the prepared sample



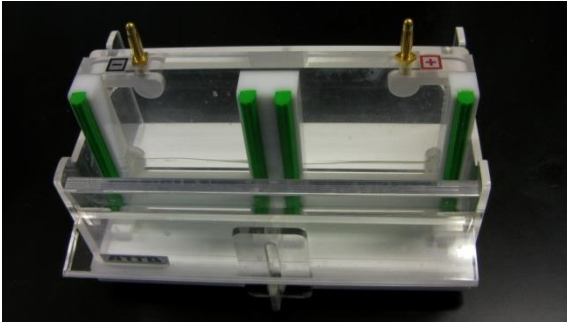
Take $50 \mu\text{l}$ of liquid from the tube marked SDS



Add $50 \mu\text{l}$ of liquid into the tubes marked 1 to 5



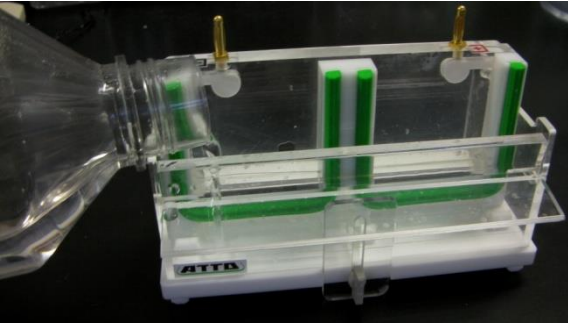
Polyacrylamide gel electrophoresis apparatus.



Electrophoresis chamber



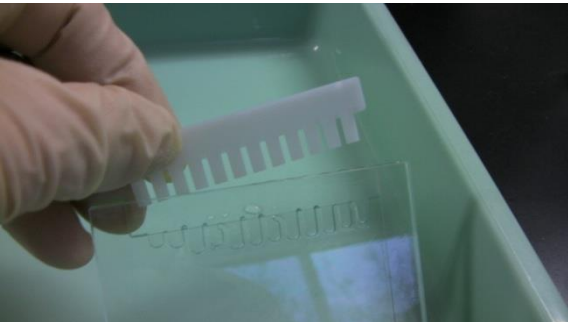
Power supply module



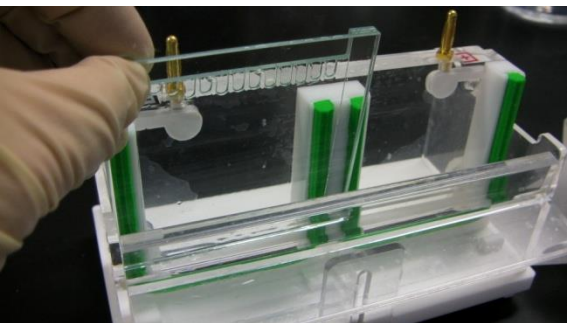
Pour electrophoresis buffer into the lower buffer tank.



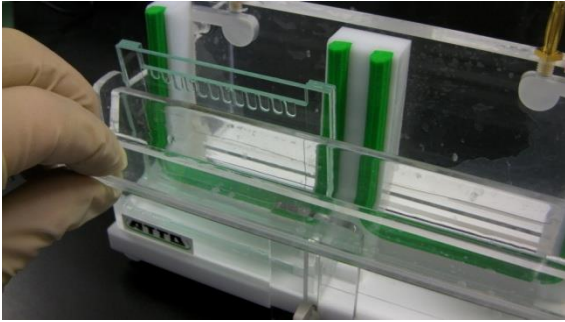
Pour into the place indicated by the arrow



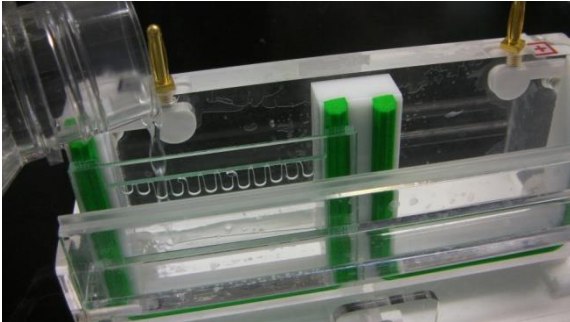
Gently remove the comb from the acrylamide gel plate.



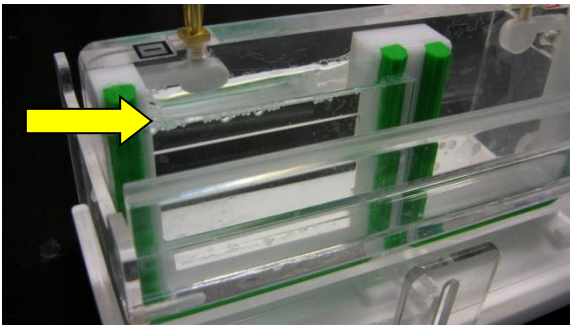
Set gel plate into lower chamber.



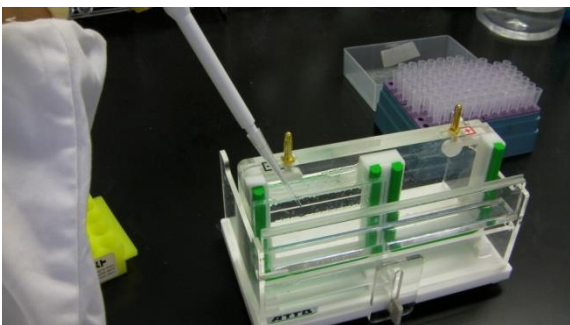
Close the plate holder to fix the gel plate.



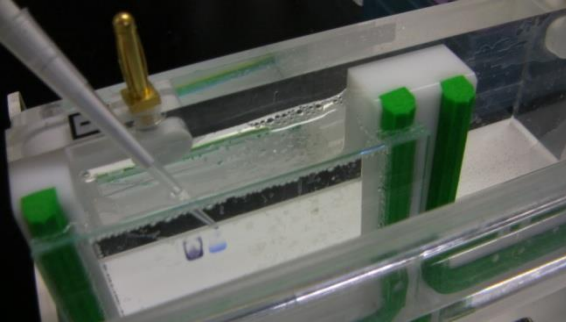
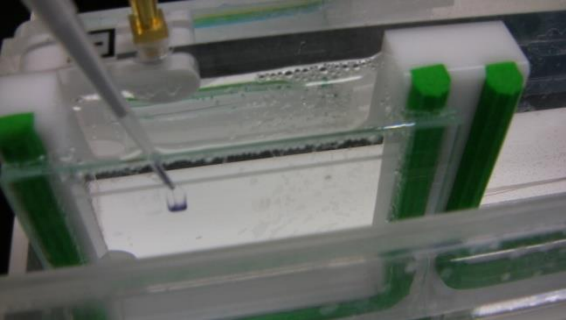
Pour electrophoresis buffer into the upper buffer tank.



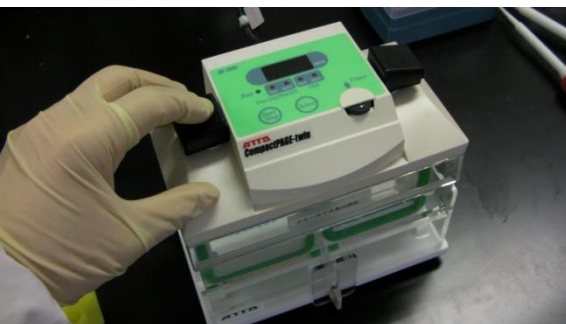
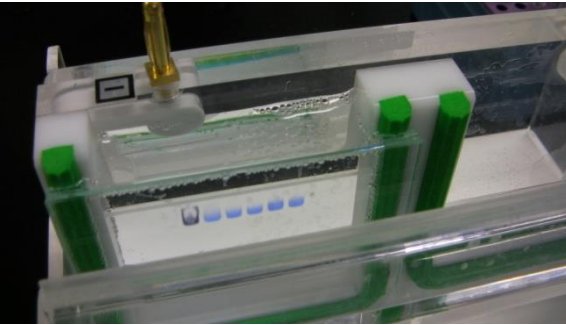
Pour into the place indicated by the arrow



Apply 4 μ l of the protein molecular weight marker to the sample well.



Apply 10 μ l of prepared samples to the sample well.



Gently place the power supply module on the electrophoresis chamber.



Turn on power.



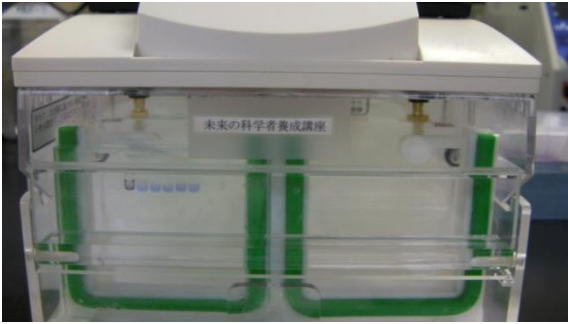
Select appropriate condition using the selector.



Start a run by pressing the Start/Stop key.



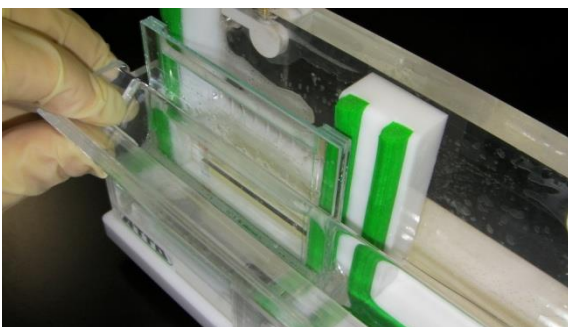
Turn on the green light of the run indicator and the timer will start.



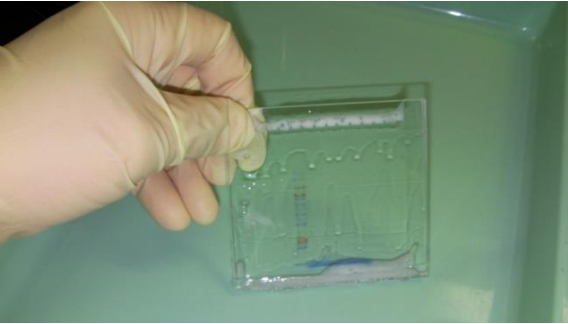
After the end of the run, turn off the electricity.



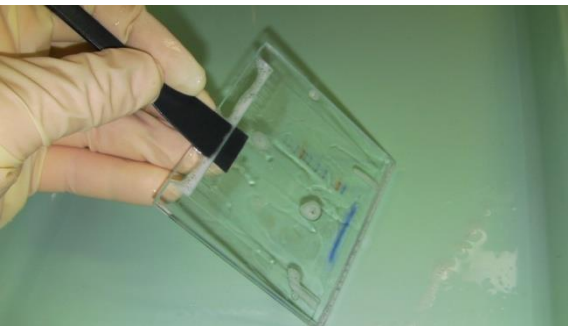
Gently pull up the power supply module to take it off.



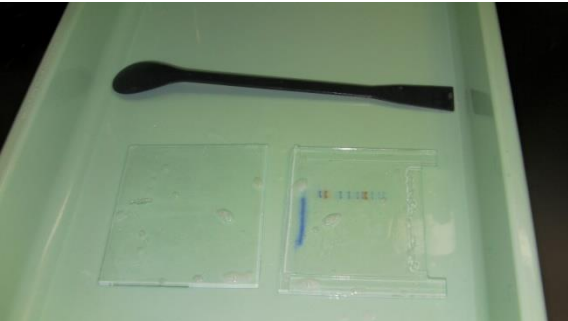
Gently pull down the plate holder.



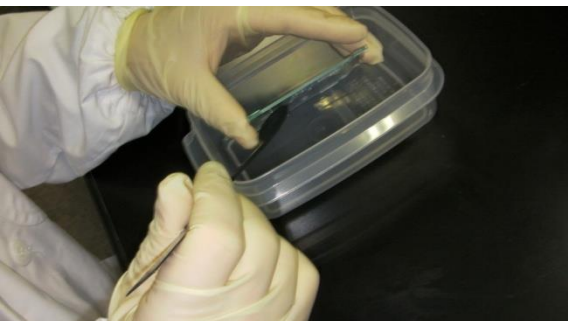
Gently take out the gel plate.
Place it in the plastic container.



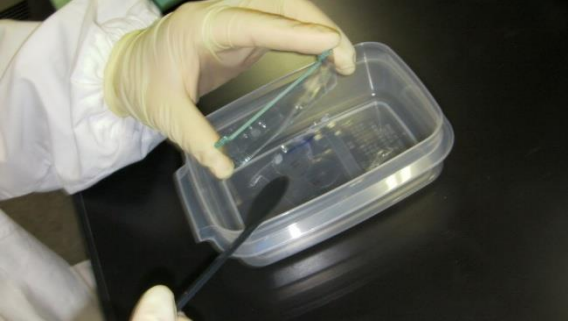
Gently insert a spatula between the glass plates.



Gently pry the glass plates.



Hold the glass plate keeping the gel below.

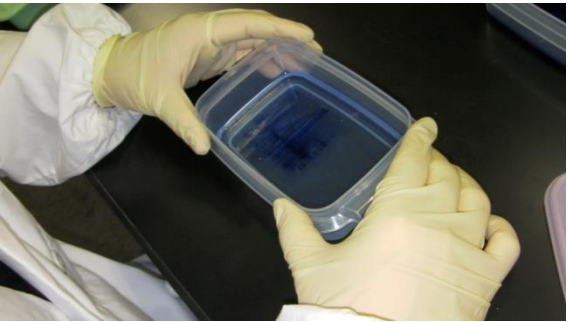


Peel off the gel.



Pour 25 ml of staining solution.

Incubate for 20 min at room temperature.



Pour off the staining solution and wash it with tap water.

Pour 25ml of pure water into the container.