**DEMO: A SIMULATED "ACID IN YOUR EYE" ACCIDENT**

**OBJECTIVE**

An acid solution of sufficient concentration will denature or coagulate the protein, albumin, in a raw egg white. This will show students what can happen if they fail to eyewear protection in a lab.

**MATERIALS**

- Raw eggs (whites only)
- 1 or more Petri dish
- Strong acid, 6 M, HCl or H$_2$SO$_4$
- Baking Soda solution, NaHCO$_3$ (sat’d)
- Dropper bottle or pipet
- Overhead projector
- Permanent marker

**SAFETY CONSIDERATIONS**

All of the acid solutions are corrosive to skin and eyes. Strong acids can be toxic by inhalation and ingestion. Wear chemical splash goggles.

**PROCEDURE/Demonstration**

Use a permanent marker to draw a large "eye" on the bottom of the petri dish. Place the egg white in the Petri dish, and place on the overhead. Discuss the similarity of the transparent egg white to the eye’s pupil. Place several drops of the acid onto the egg white. It will immediately become opaque. Some students might suggest that you can "UNDO" the damage. You might ask if they know how to "UNCOOK" an egg. Try neutralizing the spots by gently rinsing them with a saturated solution of baking soda. It cannot be made transparent again!

Note: The denaturation is equally dramatic with NaOH solution. Even when neutralized, the opaque area will continue to expand for several hours.

**REFERENCES**

Lynn Higgins, Proviso East High School, Maywood, IL.
Lee Marek, Naperville North High School, Naperville, IL., at Woodrow Wilson Chern 8 Institute.