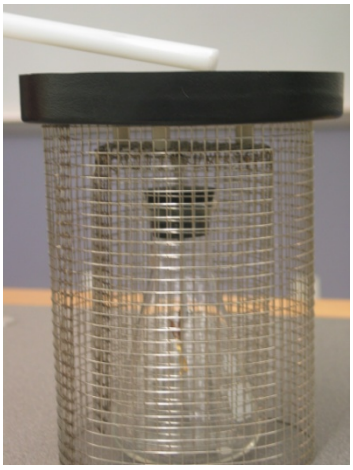
Faraday Cage: Blocking Electric Fields



Purpose: To show that a conductive wire cage effectively blocks electric fields from entering the region within.

Location: room 146; Teflon^{R} rod, fur and Erlenmeyer flask, L2; wire cage and radio, L6

Using the rod and fur, show that the charge on the rod induces (no contact) charge on the gold leaves in the flask electroscope (2nd photo, top). Then cover the electroscope with the wire cage and again try to induce charge on the electroscope leaves. No response! The electric field is blocked.

Repeat the demo starting with the portable radio turned on AM. When covered by the cage it becomes silent, suggesting that radio waves are also blocked and might be like electric fields.