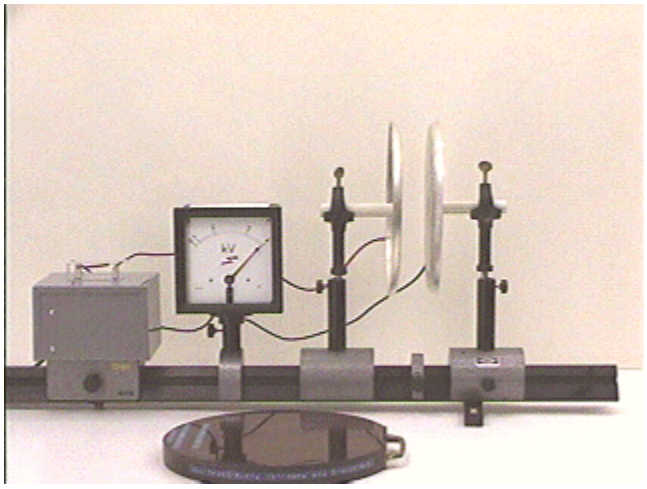
Question #110

Suppose that a parallel plate capacitor is charged to 5000 volts as seen in the photograph below. The power supply is then disconnected for the following experiment. A circular slab of the dielectric phenolic, seen at the bottom of the photograph, is inserted between the two plates of the capacitor. An electric field applied to the dielectric causes it to become polarized, that is, its polar molecules rotate to line up along the electric field lines in the capacitor.



What will happen to the voltage across the plates, as measured on the meter, when the dielectric is inserted?

After the dielectric is inserted the voltage will be:

- (a) higher, pinning the meter.
- (b) lower.
- (c) the same.

Click here for Answer #110 after April 1, 2002.

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For questions and comments regarding the *Question of the Week* contact
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