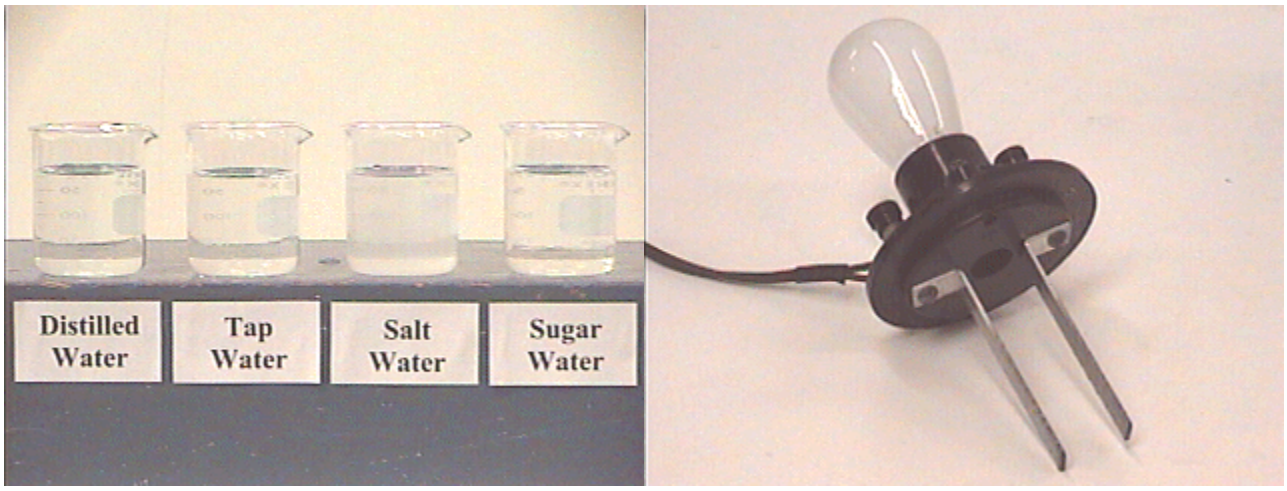
Question #191

Shown in the photograph at the left below are four identical beakers containing (from left to right) distilled water, tap water, distilled water with one teaspoon of salt dissolved in it, and distilled water with one teaspoon of sugar dissolved in it.



The photograph at the right shows a light bulb with two metallic plates sticking out below it. These two plates can be inserted into each of the beakers of water. When the plug on the end of the cord (seen in the photograph) is activated with by plugging it into a standard 120 VAC outlet, the plates are in series with the light bulb across the applied voltage, so the bulb will be brighter for more conductive water. The problem this week is to arrange the four beakers above in order of their brightness when the light bulb plates are inserted into the various beakers. That is, which of the beakers contains the more conductive liquid, and which contains the least conductive liquid.

Arrange the following in order of increasing conductivity:

- (a) distilled water.
- (b) tap water.
- (c) salt water.
- (d) sugar water.

Click here for Answer #191 after September 27, 2004.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.