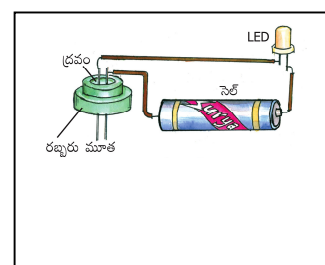
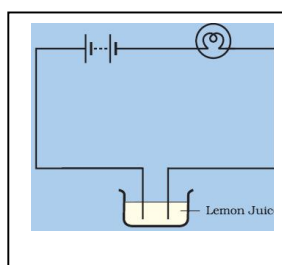


**EXPERIMENT – 1****ELECTRICAL CONDUCTIVITY OF LIQUIDS**

**Aim** : Observing electric conductivity of different liquids.

**Required** : Small glass jar or Petri dish or Beaker, Electric wires, 6V or 9V battery, 5V L.E.D. bulb, Metallic clips, Distilled water, Drinking water, Coconut oil, Lemon juice, Vinegar, Kerosene, Vegetable oil, Sugar solution, Glucose solution, Spirit, Soap water, Tomato juice

**Description** : Acidic solutions conduct electricity as hydrogen ions present in their aqueous solutions. Basic solutions conduct electricity as hydroxyl ions present in their aqueous solutions. Neutral solutions do not conduct electricity. Because no ions present in neutral solutions.



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**Procedure:**

1. Attach electric wires to 6V battery.
  2. Attach 5V L.E.D. bulb to the battery with connecting wires at one side.
  3. Hold the free ends of electric wires on both sides by using metallic clips.
  4. Take 20 ml distilled water in to Petri dish.
  5. Keep two metal clips in to distilled water. (They do not touch with each other.)
  6. Observe whether the bulb glows or not ?
  7. Note down the observation in the table.
  8. If bulb glows, electricity passes through it. If bulb doesn't glow, it means distilled water doesn't pass electricity through it.
  9. Repeat the same procedure by using Drinking water, Coconut oil, Lemon juice, Vinegar, Kerosene, Vegetable oil, Sugar solution, Glucose solution, Spirit, Soap water, Tomato juice
- Note** : Pour 20 ml of distilled water in 5 gm of glucose in Petri dish. It is glucose solution.
10. Note down the observations in each and every case in the table.

### **Observations:**

Liquid substance	Whether bulb glows or not ? ( Yes / No )	The given substance whether a good conductor or bad conductor ?
Distilled water		
Drinking water		
Coconut oil		
Lemon juice		
Vinegar		
Kerosene		
Vegetable oil		
Sugar solution		
Glucose solution		
Spirit		
Soap water		
Tomato juice		

### **Precautions :**

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- Before each experiment, clean the Petri dish with distilled water
- If 9V battery is not available attach four 1.5 V batteries.(We can also use 1.5 V battery and 1V L.E.D. bulb.
- We can use normal batteries and small filament bulb.

**Result :** Observed the electric conductivity of different liquids.

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