

Separation of Ethanol and Water

Instructions

Materials:

250 mL ethanol

250 mL water

Blue food coloring

Potassium carbonate

Large graduated cylinder with stopper

Demo Procedure:

1. Pour the ethanol into a large graduated cylinder.
2. Pour the water into the same cylinder.
3. Point out that the combined alcohol and water volume is actually less than 500 mL.
4. Add food coloring to better visualize the homogeneous solution.
5. Add potassium carbonate (30-40 grams) to the solution.
6. Stopper the graduated cylinder and shake the solution to dissolve all the salt crystals.
7. After a few minutes, a clear layer of water separates out from the blue column of alcohol solution. The clear aqueous layer is below the organic alcohol layer.