

Name _____ Date _____



SEPARATING MIXTURES QUIZ

1. The following are practical methods of separating mixtures:

Chromatography

Filtration

Distillation

Winnowing

Sedimentation

Separating funnel

Loading

Evaporation

Fractional crystallization

Centrifugation

Crystallization

Magnetic separation

Sublimation

Sieving

From the above list, what techniques would you apply for the separation of the following?

- a. Sodium chloride from its solution: _____
- b. Ammonium chloride from a white powder containing sodium chloride and ammonium chloride: _____
- c. Small pieces of metal from the engine oil of a car: _____
- d. Benzene from a mixture of benzene and methylbenzene: _____
- e. Different pigments from an extract of flower petals: _____
- f. Butter from curd: _____

- g. Oil and water: _____
- h. Tea leaves from tea: _____
- i. Iron pins from sand: _____
- j. Wheat grains from husk: _____
- k. Fine mud particles floating in water: _____
- l. Dyes: _____
- m. Cream from milk: _____
- n. A precipitate from a solution: _____
- o. Bran from flour: _____
- p. Pulp's solid particles from the vegetable juice: _____
- q. Blood cells from blood plasma: _____
- r. Iodine from a mixture of sand and iodine: _____
- s. Oil from sunflower seeds: _____
- t. Nitrate from an aqueous solution of a mixture of potassium nitrate and sodium chloride: _____
2. Why is decantation unsuitable for the separation of insoluble solids from a suspension?

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3. A mixture contains copper turnings and copper (II) sulfate crystals. Describe how the mixture can be separated.

4. Chromatography was originally used to separate colored pigments from plants hence its name *chromatography*, which is derived from the Greek word *chromos* meaning color. Can paper chromatography be used to separate colorless substances? Explain.

5. Distillation is crucial for separating different components in mixtures. It's widely used in industries to purify water, petroleum refining, recycling of oil, and produce alcoholic beverages among other applications.

- a. State two limitations of fractional distillation as a separation method in chemistry.

- b. What's the difference between simple distillation and fractional distillation?
