

According to the information given, classify the following materials as completely as possible. Use only the classifications on your "Classification of Matter" chart.

- a) A cloudy liquid begins to clear on top and become more cloudy on the bottom. SUSPENSION
- b) A gray powder is observed to contain tiny white crystals and tiny black crystals. mechanical MIXTURE
- c) A white powder melts completely at 117°C . When the heating is continued, it turns black and gives off a colourless gas. This gas gives a colourless liquid on cooling. COMPOUND
- d) A solid melts completely at 89°C and boils at a constant 432°C . PURE SUBSTANCE
- e) A clear liquid is boiled in an open container. The boiling temperature rises slowly. SOLUTION
- f) A brittle solid melts at 98°C to form a yellow liquid. At very high temperatures a vapour is formed that reverts back to the yellow liquid form on cooling. Neither the solid nor the liquid will change after being subjected to high voltages of electricity. (ELEMENT)
PURE SUBSTANCE
- g) A solid sample is dark red with some white spots in it. MIXTURE mechanical
- h) A colourless liquid is allowed to stand in an open container for several days. After this time, only a small amount of solid white residue remains. SOLUTION
- i) A white liquid separates into a white solid and a clear liquid after standing for several hours. SUSPENSION
- j) A sample of green powder is heated strongly in an open test tube. It turns black and undergoes a significant loss of mass. COMPOUND
- k) A colourless liquid is boiled in an open container until the container is completely empty. During the process, the boiling temperature does not change. PURE SUBSTANCE