

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.

b) A gray powder is observed to contain tiny white crystals and tiny black crystals.

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.

d) A solid melts completely at 89°C and boils at a constant 432°C .

e) A clear liquid is boiled in an open container. The boiling temperature rises slowly.

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.

g) A solid sample is dark red with some white spots in it.

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.

i) A white liquid separates into a white solid and a clear liquid after standing for several hours.

j) A sample of green powder is heated strongly in an open test tube. It turns black and undergoes a significant loss of mass.

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.
