

Can you identify which mystery powder is salt, corn starch, baking soda, plaster of Paris, and sugar?

Powder	color	Hand lens / microscope	Feels dry	Feels wet
A	White / pale yellow tint	Crystalline / irregular shape. Most not some cubic	gritty	Feels like wet sand and sticky
B	Bright white	Cubic crystalline	gritty	Feels like wet sand not sticky. Starts to dissolve
C	White / pale gray tint	Fine powder that clumps together	Not gritty but not completely smooth either	Sticks together in a clump and feels a little warm
D	Bright white / pale yellow tint	Very fine powder/ no clumping	Soft, very fine. Slippery when rubbed between fingers	It is difficult to rub between fingers. Somewhat sticky
E	Bright white	Fine powder with very small irregular crystals	Slightly gritty	Feels slightly gritty

Powder	vinegar	iodine	heat	water
A	Starts to dissolve	No color change	Melts, turns brown, smokes and emits sweet odor, turns black and glasslike	Dissolved quickly
B	Does not dissolve as well as A	Dissolves with no color change	No color change. Some grains popped around in pan nothing else	Dissolved quickly
C	Bubbles and fizzes	No color change	Smoked but did not change color. Emitted strong odor.	Got wet, slightly warmer when wetted
D	Gets wet	Turns blue / black	Smoked, turned brown, emitted a burned odor	Absorbed the water and formed a paste
E	bubbles	No color change	Released and odor but did not change in any other way	Did not dissolve. Seemed to stay on bottom of well