

Solutions

2.1 Place a burning splint in the tube; a squeaky pop.

2.2 Chlorine.

3.1 Bubble the gas through calcium hydroxide solution – limewater; it turns milky/cloudy; it clears again with continued bubbling, confirming CO_2 .

3.2 Oxygen; hydrogen would burn with a pop rather than relight a splint; carbon dioxide and chlorine do not support combustion/relight – chlorine only bleaches litmus.