

Rates 002 - Three Ways to Measure

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Rate of reaction = amount of product used or amount of reactant formed / time

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g/s \leftarrow cm³/s \leftarrow mol/s

Three ways to Measure the Rate of Reaction

Precipitate

Some reactants that are initially clear can go cloudy when mixed. Time how long for a mark on a piece of paper to disappear. Not very accurate and quite subjective

Change in Mass

If the reactions gives off a gas you can stick say a flask on a balance and take its mass at regular intervals.

Volume of Gas

If you add a gas syringe you can collect the gas given off and measure the volume at regular time intervals

The second and third methods enable a graph to be drawn.

Two Reactions You Need to Know

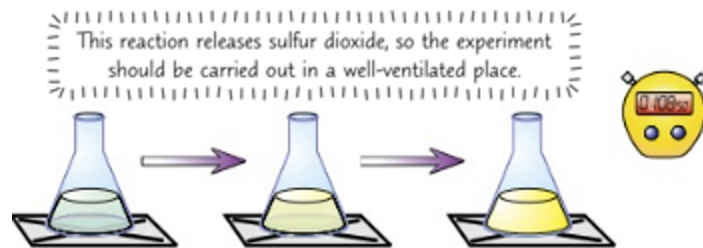
Magnesium and HCL react to produce H₂



Cotton wool allows H₂ to escape but not anything else

Repeat with different concentrations,
make sure all variables are
controlled

Sodium Thiosulfate and HCL Produce a cloudy Precipitate



Yellow precipitate of sulfur gradually forms

Again, lots of variables to control - don't forget about the depth of the solutions needing to be the same each time. Change the concentration of just one of the solutions.

You cannot really justify drawing a graph for this experiment since its a bit arbitrary.