# Methods for measuring the rate of a reaction

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You wish to measure the rate of a reaction that produces a gas, such as carbon dioxide, hydrogen or oxygen. Fill in the information below to assess different methods for doing this.

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| --- | --- | --- | --- | --- |
| **Method** | **Diagram of apparatus** | **How the method works** | **Pros of the method** | **Cons of the method** |
| **Using a balance** |  |  |  |  |
| **Collecting the gas over water** |  |  |  |  |
| **Using a gas syringe** |  |  |  |  |

You wish to measure the rate of a reaction that produces a solid, eg the rate of the reaction of sulfuric acid and sodium thiosulfate that forms sulfur. Fill in the information below to assess the methods for this.

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| --- | --- | --- | --- | --- |
| **Method** | **Diagram of apparatus** | **How the method works** | **Pros of the method** | **Cons of the method** |
| **Disappearing cross method** |  |  |  |  |

**For each of the reactions below, described by an observable change that occurs in the reaction, choose a method for measuring the rate of the reaction, and complete the rest of the table.**

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| **Method** | **Diagram of apparatus** | **How the method works** | **Pros of the method** | **Cons of the method** |
| **The reaction involves a sudden colour change, eg the iodine clock reaction.** | | | | |
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| **The reaction involves a gradual change from one colour to another, eg a metal displacement reaction where the solution changes colour.** | | | | |
|  |  |  |  |  |
| **The reaction involves a gradual change in pH, eg from acidic to neutral, or from alkaline to acidic.** | | | | |
|  |  |  |  |  |