

## Iodine Clock

AKA: Instant Coke, Instant Wine, 30-second Coke

Potassium persulphate is used to oxidize iodide ions to iodine, in the presence of [starch](#) and a small amount of thiosulphate ions. When the thiosulphate is exhausted (by reaction with the iodine produced), the dark blue iodine-starch complex is formed. The time taken for the blue colour to appear varies with rate of reaction and can be used to study the [reaction kinetics](#). For the purposes of this video, the reaction is catalysed by  $\text{Fe}^{2+}$  ions to drastically shorten the time for the color change to occur.

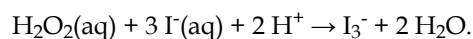
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### Introduction

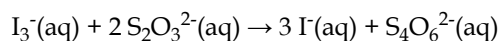


### Reaction

This reaction starts from a solution of hydrogen peroxide with sulfuric acid. To this is added a solution containing potassium iodide, sodium thiosulfate, and starch. There are two reactions occurring in the solution. In the first, slow reaction, the triiodide ion is produced .



In the second, fast reaction, triiodide is reconverted to iodide by the thiosulfate.



The iodine is then observed via the [reaction with starch](#).

## Outside Links



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