1- 0.5g Ferric Chloride
- 0.5g Potassium Thiocyanate

Add water to both and mix solutions

When they contact each other blood red color appears

$3KSCN + FeCl_3 \rightarrow Fe(SCN)_3 + 3KCl$

https://www.youtube.com/watch?v=QyNPzv5NDAE

2- $2NO_2 \rightarrow N_2O_4$ + Heat

- AT room temp, Nitrogen dioxide gas is reddish brown
when put in ice cubes reddish brown gradually disappears
In hot water reddish brown gradually reappears

https://www.youtube.com/watch?v=oC3klPMRnwo

3- Traffic Light Experiment

To begin, we need to weigh out approximately 2 grams of glucose and dissolve it with a little amount of hot water. Next, we add 10 ml of sodium hydroxide to the solution of glucose. To make the solution colorful, take a flask, fill it with hot water, and pour there a small bit of

a soluble indicator called indigocarmine. The solution now becomes deep blue. Afterwards, we pour alkaline solution of glucose into the flask and observe beautiful changes of color. First, the solution becomes green, and then it turns red and eventually becomes yellow. These colors are reminiscent of the traffic light colors -- red, yellow and green. However, this is not all. This reaction can be reversed, simply by shaking the solution. With a weak shake the solution becomes red, and with a strong one it turns green. Then the reaction proceeds into the opposite direction - green, red and yellow. So why the solution changes color when agitated? It's because of the fact that our air contains 21% oxygen. While shaking, the indicator solution is oxidized by the atmospheric oxygen. A glucose, which is a reducing agent, changes back the color of the solution to yellow. However, not only the indigocarmine has such properties. There is also another existing indicator which is called Methylene Blue. It can be used as well, but then the colors will be different. When adding the alkaline solution of glucose, the solution becomes colorless.

https://www.youtube.com/watch?v=-DCkPN_FgOQ