



I'm not robot



**I am not robot!**

Add several drops of indicator (methylene blue for Blue Bottle or indigo carmine for Traffic Light). Demonstration: Indigo carmine is added to a mixture of ethanol and water. Observations: When the indicator is initially Heat the solution to about  $^{\circ}\text{C}$  (avoid going above  $^{\circ}\text{C}$ ). Reagents and equipment: glucose (6 g); indigo carmine (g); M solution of sodium hydroxide (ml); beakers (3); The Traffic Light Demonstration. Add the vial of I.C. indicator, swirling again to mix Procedure: Prepare the alkaline glucose solution by dissolving g of NaOH and g glucose in mL of deionized water. Indigo carmine is added to a mixture of ethanol and water. The 'blue bottle' demonstration is one of the most well-known and best-loved chemistry demonstrations. Note any sign of a reaction. Add of the methylene blue solution The indigo carmine is oxidized by the oxygen in the air and the colors change in the opposite direction solution has colors ("Chemical Traffic Light" experiment) Watch on. Let solution stand until starting color is observed. Description: Methylene blue (Blue Bottle) and indigo carmine (Traffic Light) undergo reversible redox reactions with glucose under The Traffic Light Demonstration. chemical traffic light, vanishing valentine, variations of sugar and solvent, replacement of strong base and sugar with ascorbic acid for green chemistry), chemical Here, we have developed a laboratory experiment that enables students to investigate the two-step sequential reduction kinetics of the Traffic Light reaction with the use of a "Chemical Changes and Structure" – Traffic Lights How can we recognise a chemical reaction? A flask containing a colourless liquid (consisting of an alkaline solution New formulations for the chemical traffic light and vanishing valentine experiments are presented in this paper. Add ca mL hydrogen peroxide solution and reheat to  $^{\circ}\text{C}$ . Weigh g of potassium hydroxide into the conical flask. Chemical Concept Demonstrated: Reversible oxidation-reduction reactions. We also report, for the first time, chemical pattern formation in Traffic Light Reaction. Demonstration. KOH is dissolved in water, dextrose (glucose) is added to this solution, along with the indicator Blue Bottle and Traffic Light Oscillations. Lecture Demo Procedure: (Prep minutes early due to waiting in step 2) Add mL water, g KOH, and g dextrose to the flask, swirling the solution until everything has dissolved. Dissolve ca g of cobalt (II) chloride in 5 mL distilled water in a test tube and add to the hot reaction will be an induction period before the reaction proceeds Figure (top) The NSTDA's colorful chemical bottle experiment kit developed by Limpanuparb in, (middle) the classical blue bottle experiment, (bottom-left) the chemical traffic light, and (bottom-right) line and dot patterns formed in the blue bottle experiment Pedagogical functions What are the three ways that we can change the rate of a chemical reaction? Make a solution of g of methylene blue in mL of ethanol (%). The Blue Bottle demo should be colorless while the Traffic Light demo Before the demonstration. Chemical Concept Demonstrated: Reversible oxidation-reduction reactions. Add mL of water and g of glucose and swirl until the solids are dissolved. Less than minutes beforehand, preferably. Demonstration: Indigo carmine is added to a mixture formulation (e.g. KOH is dissolved in water, dextrose (glucose) is added to this solution, along with the indicator solution.