CREATIVE WORKSHOPS & PROJECTS

make, play, discover

RISK & SAFETY GUIDANCE FOR:

CYANOTYPE CHEMICALS

CAUTION:

- Keep away from children
- Avoid skin and eye contact
- Do not ingest
- Store in a cool, dry place
- Dispose of responsibly
- Heavily dilute all unused chemical and dispose in an outside drain
- Do not pour into public waters

- Do not do this process with children or near pets, and ensure you follow the safety guidance fully. Note that coated and dried cyanotype papers are safe to use with children, provided they are accompanied by a responsible adult.

Safety Guidance – Before You Begin

1. GET RISK & SAFETY READY:

- Wear a face mask to avoid inhaling dust or fumes from the chemicals
- Use gloves, safety goggles if you have a pair, and wear a lab coat or apron. This is to avoid direct contact with the chemicals with bare hands or skin as they can be irritants
- Wash hands and any exposed skin with soap and water after handling. Flush eyes with water immediately and thoroughly should any chemicals go in your eyes and seek immediate medical advice
- Keep chemicals away from food, drinks, and your mouth by working in an area away from where food is prepared or stored

- Store your chemicals properly: keep chemicals in labelled, sealed, light-safe containers and out of reach of children and pets
- Work in a well-ventilated and dimly lit area, away from children and pets. If working in low light conditions make sure you are organised before you begin and remove any trip hazards
- Use dedicated tools: reserve measuring tools, containers, and brushes specifically for chemical use. Wash and dry your tools immediately after use with running water
- Wipe all spillages and drips immediately and wash any used cloths separately from your clothes

Preparing Your Cyanotype Liquid Chemicals: Solution A and Solution B

2. GATHER MATERIALS & PREPARE YOUR AREA:

- 10g Ferric Ammonium Citrate
- 5g Potassium Ferricyanide
- Distilled Water (you can create this by boiling water, and leaving it to cool to room temperature). You can use tap water provided it is pH neutral
- Measuring tools: scales and graduated cylinder(s)
- Two light-safe containers (included in the set, to be stored in the light-safe bag)
- Clean, organised and dimly lit workspace. It is important to handle the solutions in a dimly lit area to prevent degradation of the prepared chemicals

3. PREPARE “SOLUTION A” - LIQUID FERRIC AMMONIUM CITRATE:

- Measure 10g of Ferric Ammonium Citrate from the canister into the provided and labelled bottle "Solution A" (powder to water ratio 1:5)
- Be very careful and gentle when opening the canister to avoid the chemical from spilling out
- Pour in 50ml of distilled water
- Ensure the lid is screwed on tightly and shake until fully dissolved
- Wash your test tube

4. PREPARE “SOLUTION B” - LIQUID POTASSIUM FERRICYANIDE:

- Measure 5g of Potassium Ferricyanide from the canister into the provided and labelled bottle "Solution B" (powder to water ratio 1:10)
- Be very careful and gentle when opening the canister to avoid the chemical from spilling out
- Pour in 50ml of distilled water
- Ensure the lid is screwed on tightly and shake until fully dissolved
- Wash your test tube
- Leave both liquid chemical A and B to sit for 24 hours in the light safe bag before using, to ensure all the powder has dissolved fully.

5. STORAGE:

- Store both solutions in clearly labelled and tightly screwed bottles, in a dark, cool place. Use the light safe bag
- Keep out of sight and reach of children

- Should mould appear on the chemicals when you come to use them, simply remove and discard before mixing. This does not indicate there is an issue with the chemical and is common
- Prepared liquid chemicals A and B will last for several months if kept sealed and away from light, and as separate solutions.

Mixing Your Cyanotype Light-Sensitive Solution

6. MIX FOR USE:

- When ready to use and coat your paper/fabric, mix equal parts of Solution A and Solution B in a 1:1 ratio in to a ceramic dish
- Do not use a plastic or metal or metal dish
- Perform mixing and coating (next step) in a dimly lit or low-light environment to avoid premature exposure
- Only mix the amount you need, as the combined solution cannot be stored. It is best to have additional paper/fabric to coat to ensure mixed chemical doesn't go to waste

NOTE: 50ml of mixed solution (25ml Solution A + 25ml Solution B) will coat approximately 12 A4 sheets of paper, depending on its absorbency. You will need more for fabrics, and papers with a higher absorbency.

- Wipe up all spillages and drips immediately
- It is best to work on a non-porous surface (e.g. covered in a wipe-clean cloth). Mixed light-sensitive solution is reactive to UV light, and can stain white goods, porous surfaces, etc. Ensure you wipe these up with a cloth immediately to prevent staining.

Coating Your Papers with the Cyanotype Light-Sensitive Solution

7. COAT YOUR PAPER:

- Use a foam brush or hake brush (no metal attachments) to brush the chemical on to your paper or fabric
- Ensure an even coating and avoid 'pooling' of the chemical – this will take longer to dry, create risk of dripping, and leave areas of dense colour
- If you want to double-coat your papers, ensure the first layer is completely dry before applying another layer. This will create a darker blue colour on exposure
- Leave your papers to dry in a dark, well-ventilated room, out of reach of children and pets

Storing Your Coated Papers

8. STORING YOUR COATED PAPER:

- Once dry, store in a light-safe bag or envelope and use within 6 months
- Your papers may discolour from the lime green colour to a blue colour – this is a normal reaction to oxidisation. Provided they have not been exposed to UV light they will still be good to use