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**SSERC Risk Assessment** (revised version March 2018)

(based on HSE’s INDG 163 ‘Risk assessment - A brief guide to controlling risks in the workplace’)

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| Activity assessed | Cyanotypes  |
| *Date of assessment* | 06/02/2018 |
| *Date of review (****Step 5****)* |  |
| *School* |  |
| *Department* |  |

| Step 1 | Step 2 | Step 3 | Step 4 |
| --- | --- | --- | --- |
| *List Significant hazards here:* | *Who might be harmed and how?* | *What are you already doing?**What further action is needed?* | *Actions* |
| *by whom?* | *Due date* | *Done* |
| **Recipe 1** |  |  |  |  |  |
| Iron ammonium citrate and potassium hexacyanoferrate III are irritants | Technicians (possibly) pupils while preparing solutions. | Wear eye protection. Avoid raising dust. |  |  |  |
| ‘Blueprint’ reagent is of no significant hazard |  |  |  |  |  |
| **Recipe 2 Ferro prussiate reagent** |  |  |  |  |  |
| .880 ammonia solution is corrosive and gives off toxic fumes. | Technicians, while preparing ferro-prussiate reagent. | Wear nitrile gloves and goggles (BS EN166 3). Handle in a fume cupboard |  |  |  |
| Iron III chloride is corrosive | Technicians, while preparing ferro-prussiate reagent. | Wear nitrile gloves and goggles (BS EN166 3). Handle in a fume cupboard |  |  |  |
| potassium hexacyanoferrate III is an irritant | Technicians (possibly) pupils while preparing solutions. | Wear eye protection. Avoid raising dust. |  |  |  |
| Tartaric acid (2,3-dihydroxybutanedioic acid) causes Eye damage Cat 1 | Technicians (possibly) pupils while preparing ferro-prussiate reagent. | Wear goggles (BS EN166 3) |  |  |  |
| Ferro prussiate reagent is probably corrosive and harmful\*. | Technicians (possibly) pupils while preparing or using solutions. | Wear goggles (EN 166 3) and possibly gloves. |  |  |  |
| **Recipe 3** |  |  |  |  |  |
| Ammonium iron III oxalate is harmful if swallowed or in contact with skin (As is the potassium salt | Technicians (possibly) pupils while preparing solutions. | Wear nitrile gloves and eye protection).  |  |  |  |
| Sunscreen & cyanotype reagent is of no significant hazard |  |  |  |  |  |
| **All** |  |  |  |  |  |
| Uv light, if used, is hazardous. | Pupils, teachers, technicians while image is being exposed. | Use a purpose built uv light box for exposure and ensure that it is not possible to see the uv source. |  |  |  |

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| **Description of activity:**his is a simple photographic process that uses iron compounds rather than the much more expensive silver ones in normal film photography.A sensitiser solution is created (from one of three recipes) and used to coat paper.Once dry, the paper is exposed to sunlight or uv light with a negative or mask on top to create an image.The picture is ‘developed’ by running it under cold water. |

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| **Additional comments:**\* A full assessment of the Ferro prussiate reagent is difficult to do without expert testing. The assumption of corrosive is based on the concentrations of the chemicals that are added. However, reactions in the mixture may well create a less hazardous solution. For instance there is probably at least some production of Iron ammonium tartrate and it would be reasonable to assume the properties of this are the same as the citrate – irritant only. |