

## University of Oxford COSHH Assessment Form

Read the notes on completion before attempting to fill in this form. If insufficient space is available under any section, use a separate piece of paper and attach it to the form.

File ref: Silver nitrate-COSHH

Date: February 2016

**Department:** NDM,  
NDMRB

**Persons involved:** All NDMRB Laboratory Staff

**Location of work:**  
NDMRB Laboratories

**Description of procedure:** General lab reagent (viability reagent)

Substances used	Quantities used	Frequency of use	Hazards identified	Exposure route
Silver nitrate CAS No 7761-88-8	5g - 500g available	Weekly	H272 May intensify fire; oxidizer. H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H410 Very toxic to aquatic life with long lasting effects	Inhalation, ingestion, contact with skin and eyes.

**Could a less hazardous substance (or form of the substance) be used instead?** Yes/No

**Justify not using it:**

### What measures have you taken to control risk?

**Engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**PPE:** Safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Wash and dry hands.

**Management measures:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition. Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Light sensitive. Storage class (TRGS 510): Oxidizing hazardous materials

**Most important symptoms and effects, both acute and delayed:** May cause argyria (a slate-grey or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver). Absorption into the body leads to the formation of methaemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated

**Components with workplace control parameters**

Component	CAS-No.	ValueForm of exposure	Control parameters	Basis
Silver nitrate	7761-88-8	TWA	0.01 mg/m3	UK. EH40 WEL - Workplace Exposure Limits
	Remarks	Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used		
		TWA	0.01 mg/m3	Europe. Indicative occupational exposure limit values
		Indicative		

**Accidental release measures:** Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

**Checks on control measures:**

**Is health surveillance required?** No, workplace exposure threshold will not be exceeded.

**Training requirements:** None

**Emergency procedures:**

**General advice** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Fire fighting measures:** Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture:** Nitrogen oxides (NOx), Silver/silver oxides Container explosion may occur under fire conditions

**Advice for Fire fighters:** Wear self-contained breathing apparatus where possible.

**Further information**

Use water spray to cool unopened containers.

**Waste disposal:**

Contact Lab Manager or Safety Office in order to dispose of waste.

Name and position of assessor: Tiphaine Bouriez-Jones, Lab Manager

Signature:



Name of supervisor (student work only):

Signature:

Name of head of department or nominee:

Signature: