

Toluidine blue O concentrate (aqueous solution)

Safety data sheet

Prepared in accordance with Regulation (EC) No. 1907/2006 (REACH)

Version 1.0 | Created: 1 June 2015 | Revised: Not applicable

SECTION 1. Identification of the substance/mixture and of the company/undertaking

Product name and description	Toluidine blue O concentrate (0.08% Toluidine blue O in water)
Trade name/Brand	Not applicable
Synonym(s)	(7-amino-8-methyl-phenothiazin-3-ylidene)-dimethyl-ammonium solution. Tolonium chloride solution.
REACH Number	Not applicable, mixture
CAS Number	Not applicable, mixture
EC Number	Not applicable, mixture
Recommended use	This product is a laboratory preparation for educational use only. The concentrated Toluidine blue O solution should be diluted with an equal volume of distilled or deionised water before use. This diluted solution should be used for staining nucleic acids in electrophoresis gels as described in the relevant NCBE Teacher's and Students' guides.
Uses advised against	None
Supplier of the product and of this safety data sheet	National Centre for Biotechnology Education (NCBE) University of Reading 2 Earley Gate Whiteknights READING RG6 6AU United Kingdom T: 0118 9873743 F: 0118 9750140 E: NCBE@reading.ac.uk W: www.ncbe.reading.ac.uk
Manufacturer of the product	National Centre for Biotechnology Education (NCBE) University of Reading 2 Earley Gate Whiteknights READING RG6 6AU United Kingdom T: 0118 9873743 F: 0118 9750140 E: NCBE@reading.ac.uk W: www.ncbe.reading.ac.uk
Emergency telephone number	0118 9873743 (NCBE, University of Reading. 08.30–17.00 weekdays only)

SECTION 2. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 [CLP] Not classified.

Label elements None required.

Other hazards None found.

SECTION 3. Composition/Information on the ingredients

Name of component (Synonyms) [CLP index number]	Weight (%)	EC (EINECS) number	CAS number	REACH registration number	Classification under Regulation (EC) No 1272/2008 [CLP]
Water	99.92	231-791-2	7732-18-5	-	-
Toluidine blue O	0.08	248-105-2	92-31-9	-	-

SECTION 4. First aid measures

General information If symptoms persist or in all cases of doubt, seek medical advice. Show this Safety Data Sheet to the doctor in attendance.

Inhalation Move the casualty to fresh air. If the victim has stopped breathing artificial respiration and/or oxygen may be necessary. Call a doctor immediately.

Skin contact Wash affected area with water. Seek medical attention if irritation occurs.

Eye contact Check for and remove contact lenses if present. Rinse opened eye immediately with running water, also wash under the eyelids, for several minutes. Seek medical advice immediately.

Ingestion Do NOT induce vomiting. Never give an unconscious person anything to drink. If the victim is conscious, they should drink plenty of water.

Self-protection of the first aider Rinse your hands with water after handling the Toluidine blue O solution.

Most important symptoms and effects, both acute and delayed None known.

Indication of any immediate medical attention and special treatment If in contact with the eyes, flush with water immediately. If ingested, do not induce vomiting.

Advice to doctor Treat symptomatically.

SECTION 5. Firefighting measures

The product is 99.9% water and is not flammable.

Extinguishing media

Not applicable.

Special hazards arising from the substance or mixture

None known.

Advice for firefighters

Not applicable.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear suitable personal protection, such as a lab coat and gloves to prevent staining of clothes and skin.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Wash down a foul water drain with plenty of water. After cleaning, wash away traces with water. Stains on plastic laminate benchtops caused by the Toluidine blue O may be removed with dilute bleach.

Reference to other sections

See Section 13 for disposal instructions.

SECTION 7. Handling and storage

Precautions for safe handling

Observe normal laboratory safety procedures. Avoid contact with skin and eyes. Wash hands after handling the product.

Conditions for safe storage, including any incompatibilities

Store in the original packaging, tightly closed and upright, and out of direct sunlight. Store in a cool, dry, well-ventilated location.

Specific end use(s)

The diluted Toluidine blue O solution is used to stain nucleic acids *in situ* in agarose electrophoresis gels.

SECTION 8. Exposure controls/personal protection

Control parameters

Exposure limits	No information available.
Biological limit values	No information available.
Derived no effect level	No information available.
Predicated no effect level	No information available.

Exposure controls

Select personal protective equipment appropriate for the operations taking place. For example, wear a lab coat and protective gloves when diluting the mixture. Avoid contact with eyes and skin. Handle in accordance with good laboratory hygiene and safety practice. Wash hands before breaks and after handling the mixture.

SECTION 9. Physical and chemical properties

Physical state	Liquid.
Appearance	Clear, dark blue colour.
Odour	Odourless.
pH	No information available.
Flash point	Does not flash.
Solubility	No information available.

SECTION 10. Stability and reactivity

Chemical stability	No decomposition if used and stored according to the specifications.
Possibility of hazardous reactions	None known.
Conditions to avoid	None known.
Incompatible materials	None known.
Hazardous decomposition products	None known.

SECTION 11. Toxicological information

Acute toxicity	No information available.
Chronic toxicity	No information available.
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Sensitization	No information available.
Mutagenic effects	No information available.
Reproductive effects	No information available.
Developmental effects	No information available.
Target organs	No information available.
Endocrine disruptor information	No information available.

SECTION 12. Ecological information

Toxicity	No information available.
Persistence and degradability	Expected to be biodegradable.
Bioaccumulative potential	No information available.
Mobility in soil	No information available.
Results of PBT and vPVB assessment	No information available.
Other adverse effects	None known.

SECTION 13. Disposal considerations

Waste from residues/unused product	Wash down a foul water drain with plenty of water.
Contaminated packaging	Dispose of in normal waste according to local regulations.

SECTION 14. Transport information

UN number	Not applicable.
UN proper shipping name	Not applicable.
Transport hazard class	Not applicable.
Packaging group	Not applicable.
Environmental hazards	Not applicable.
Conditions for safe storage	Keep the Toluidine blue O concentrate and diluted solution when made up in a tightly-closed container. Store in a dry, cool place, away from direct sunlight.

SECTION 15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available.

Chemical Safety Assessment

No information available.

SECTION 16. Other information

Refer to the Teacher's and Students' guides which accompany the NCBE kits. These can be downloaded from the NCBE's Web site: www.ncbe.reading.ac.uk

The information given in this Safety Data Sheet is based on the present state of our knowledge.

This Safety Data Sheet has been compiled and is solely intended for this product.

END OF SAFETY DATA SHEET