

TE-1 buffer (dilute)

Safety data sheet

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

Version 1.0 | Created: 9 May 2016 | Revised: Not applicable

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

Product name and description	TE-1 buffer (dilute)
Trade name/Brand	Not applicable
Synonym(s)	Dilute Tris-EDTA buffer
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. This diluted solution should be used as described in the relevant Teacher's and Students' guides provided by the NCBE.
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 (Synonym) [CLP index number]	Weight (%)	EC (EINECS) number	CAS number	REACH registration number	Classification under Regulation (EC) No 1272/2008 [CLP]*
Water	99.839	231-791-2	7732-18-5	-	-
TRIS (Trometamol; tris(hydroxymethyl)aminomethane; 2-Amino-2-hydroxymethyl-propane-1,3-diol)	0.157	201-064-4	77-86-1	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)
EDTA disodium salt dihydrate (Disodium EDTA)	0.003	205-358-3	6381-92-6	-	Acute Tox. 4 (H332)

* These classifications refer to the pure (100%) substances, not to the very dilute solution supplied.

For the full text of the safety classifications (H-statements), refer to Section 16.

SECTION 4. First aid measures

General information This mixture is not hazardous.

Inhalation This is unlikely, as only 6.5 ml of the solution is supplied. Move the victim to fresh air. If the victim has stopped breathing artificial respiration and/or oxygen may be necessary. Call a doctor immediately.

Skin contact If the solution is spilt, rinse the affected area with water.

Eye contact No action is necessary (an eyewash may cause more irritation than the solution).

Ingestion No action necessary.

Self-protection of the first aider If you come into contact with the solution, rinse your hands with water.

Most important symptoms and effects, both acute and delayed Not applicable.

Indication of any immediate medical attention and special treatment Not applicable.

Advice to doctor Treat symptomatically.

SECTION 5. Fire fighting measures

Extinguishing media

Not applicable (the solution is >99.8% water).

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

Not applicable.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up

Wipe up any spills of the solution with absorbent material (e.g., paper towels) and water. Dispose of the paper towels in the normal waste.

Reference to other sections

See Section 13 for disposal instructions.

SECTION 7. Handling and storage

Precautions for safe handling

Wear a lab coat to prevent spills from damaging clothing.

Conditions for safe storage, including any incompatibilities

Not applicable.

Specific end use(s)

In the *Plant PCR and Evolution kit*, the solution is used to wash the paper discs onto which plant material has been crushed.

SECTION 8. Exposure control/personal protection

Control parameters

Exposure limits

The product as supplied does not contain any hazardous materials with occupational exposure limits established by regulatory bodies.

Biological limit values

The product as supplied does not contain any hazardous materials with occupational exposure limits established by regulatory bodies.

Derived no effect level

No information available.

Predicated no effect level

No information available.

Personal protective equipment

Eye protection

Not required.

Hand protection

Not required.

Skin and body protection

Wear a lab coat to prevent spills from damaging clothing.

Respiratory protection

Not required.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls

No information available..

SECTION 9. Physical and chemical properties

Appearance	Clear, colourless.
Physical state	Liquid.
Odour	Odourless.
Odour threshold	Does not apply, as the mixture is odourless.
pH	8.0 @ 20 °C
Melting point / Range	No data available.
Boiling point / Range	> 100 °C @ 760 mm Hg.
Flash point	Not applicable; does not flash.
Evaporation rate	No data available.
Flammability (solid, gas)	Not applicable as the mixture is a liquid.
Explosion limits	No data available.
Vapour pressure	No data available.
Vapour density	No data available.
Density @ 20 °C	~ 1 g / ml
Relative density	Not applicable as the mixture is a liquid.
Solubility in water	Readily soluble.
Solubility in other solvents	No data available.
Partition coefficient: n-octanol/water	No data available.
Autoignition temperature	No data available.
Decomposition temperature	No data available.
Viscosity	No data available.
Explosive properties	No data available.
Oxidising properties	No data available.

Other information

No additional information relevant to the safe use of the substance.

SECTION 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	When stored at room temperature, the product is stable.
Possibility of hazardous reactions	None in normal use.
Conditions to avoid	None.
Incompatible materials	None known.
Hazardous decomposition products	None known.

SECTION 11. Toxicological information

Acute toxicity	TRIS: LD50 Oral 5,900 mg/kg (Rat)
Irritation	On the skin: no irritant effect; On the eye: irritating effect.
Corrosivity	No information available.
Sensitisation	No sensitising effects known.
Repeated dose toxicity	No information available.
Carcinogenicity	No information available.
Mutagenicity	No information available.
Toxicity for reproduction	No information available.
Developmental effects	No information available.
Target organs	None known.
Other adverse effects	The toxicological properties have not been fully investigated.
Endocrine disruptor information	None known.

SECTION 12. Ecological information

Ecotoxicity effects	No information available.
Toxicity	No information available.
Persistence and degradability	Biodegradable.

Bioaccumulative potential	Not expected to bioaccumulate.
Mobility in soil	No information available.
Results of PBT and vPVB assessment	Not applicable.
Other adverse effects	None known.

SECTION 13. Disposal considerations

Waste from residues/unused product	Wash down a foul water drain with plenty of water. Wipe up any spills of the solution with absorbent material (e.g., paper towels) and water. Dispose of the paper towels in the normal waste.
Contaminated packaging	Rinse with water and dispose of in normal waste according to local regulations. Recycle the container where appropriate facilities are available.

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.

SECTION 15. Regulatory information

Chemical Safety Assessment A Chemical Safety Assessment has not been carried out.

Schools and colleges in the UK should refer to *Topics in Safety*, which includes chapters on both practical microbiology and work with DNA: *Topics in safety* (2001) [Third edition] Association for Science Education. ISBN: 0863573169.

An updated (October 2014) version of Chapter 16, covering work with DNA, can be found on the NCBE's web site: www.ncbe.reading.ac.uk and on the Association for Science Education's web site: www.ase.org.uk

SECTION 16. Other information

Full text of GHS hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Please refer to the Teacher's guide that accompanies the NCBE kit you are using the TBE buffer with. This 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