University of Reading

Hydrogencarbonate indicator solution, 10x

Safety data sheet

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

Version 1.2 | Created: 30 May 2014 | Revised: 1 June 2015

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

Product name and description	Hydrogencarbonate indicator solution, 10x
Trade name/Brand	Not applicable
Synonyms	Bicarbonate indicator 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. It should be used in accordance with the instructions in the NCBE *Investigating photosynthesis kit* (See Section 16). Hydrogencarbonate indicator is a pH indicator that changes colour according to the amount of carbon dioxide dissolved in it.
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 to17.00 weekdays only)

SECTION 2. Hazards identification

Classification according to Regulation (EC) No. 1272/2008 [CLP] Unclassified

Label elements None required

Other hazards None

SECTION 3. Composition/information on 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	97.94	231-791-2	7732-18-5	–	–
Ethanol (Ethyl alcohol) [603-002-00-5]	1.96	200-578-6	64-17-5	–	Flamm. Liq. 2 (H225)
Sodium hydrogencarbonate (Sodium bicarbonate)	0.08	205-633-8	144-55-8	–	–
Thymol blue	<0.02	200-973-3	76-61-9	–	Acute Tox. 4 (H302)
Cresol red	<0.01	217-064-2	1733-12-6	–	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335)

* *Note that the H statements in the table and in Section 16 refer to pure substances, such as 100% Cresol red powder. They do not apply to the indicator solution supplied.*

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

SECTION 4. First aid measures

General information This product is not hazardous.

Inhalation Move the casualty to fresh air. If respiratory problems occur, consult a doctor.

Skin contact Remove contaminated clothing, which can then be washed as normal. Wash indicator off the skin with water.

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 if irritation occurs.

Ingestion Rinse out mouth with water, then drink plenty of water.
Do not induce vomiting.

Self-protection of the first aider Rinse your hands/skin with water if you spill the indicator on yourself.

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

Indication of any immediate medical attention and special treatment First Aid as outlined above.

Advice to doctor Treat symptomatically.

SECTION 5. Firefighting measures

The product is 98% water.

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
Not applicable.

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. After cleaning, wash away traces with water.

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
Store at room temperature.

Specific end use(s)
In the NCBE *Investigating photosynthesis kit*, the indicator solution is used to indirectly measure dissolved carbon dioxide concentration. It should be diluted before use according to the instructions in the NCBE *Investigating photosynthesis kit*.

SECTION 8. Exposure controls/personal protection

Control parameters

Exposure limits
Components with workspace control parameters

Component	CAS Number	Workplace exposure limit		Legal basis
Ethanol	64-17-5	Long term exposure limit (8 hour time-weighted average reference period)	1 000 ppm 1 920 mg/m^3	UK. EH40 WEL
		Short-term exposure limit (15 minute reference period)	3 000 ppm 5 760 mg/m^3	

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

Exposure controls

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	Dark red coloured aqueous solution.
Odour	Odourless.
pH	7.4
Flash point	Does not flash.
Solubility	Not applicable.

SECTION 10. Stability and reactivity

Chemical stability	No information available.
Possibility of hazardous reactions	No information available.
Conditions to avoid	No information available.
Incompatible materials	No information available.
Hazardous decomposition products	No information available.

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. The bottle is made of polypropylene and can be recycled.

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

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

Full text of GHS hazard statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Refer to the Teacher's guide which accompanies the NCBE *Investigating photsynthesis kit*. 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.

This Safety Data Sheet was revised on 1 June 2015, when the older (67/548/EEC [DSD]) safety classifications were deleted.

END OF SAFETY DATA SHEET