MATERIAL SAFETY DATA SHEET

Version 1.1, July 2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 Product identifiers

Product Name: Orangu™
Catalog Number: OR01

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Cell Guidance Systems
Moneta Building, Babraham Research Campus,
Cambridge CB22 3AT, UK
Web: www.cellgs.com
Email tech@cellgs.com
Telephone: + 44 (0)1223 850186

1.4 Emergency Telephone Emergency Tel: + 44 (0) 1223 850186 (09.00 - 17.00 GMT)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

This substance does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC or 1272/2008.

2.2 Label elements

The product does not need to be labeled in accordance with EC directives or respective national laws.

2.3 Other hazards

Material may be irritating to the mucous membranes and upper respiratory tract.

May be harmful by inhalation, ingestion, or skin absorption.

May cause eye, skin, or respiratory system irritation.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product Name:	[2-(2-methoxy-4-nitrophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfophenyl)-2H-tetrazolium, monosodium salt
CAS Number:	193149-74-5
RTECS Number:	na
EC Number:	na
GHS Classification:	No data available

Product Name:	1-methoxy-5-methylphenazinium methyl sulphate
CAS Number:	65162-13-2
RTECS Number:	na
Concentration:	<0.1%
EC Number:	265-579-6
GHS Classification:	Acute Tox.(O) 4: H302, Skin Corr. 2: H315, Eye Damage 2: H319, Carcinogen 2: H351

Product Name:	Sodium chloride
CAS Number:	7647-14-5
RTECS Number:	VZ4725000
Concentration:	0.0 – 5.0 %
EC Number:	231-598-3
GHS Classification:	No data available

Product Name:	Potassium chloride
CAS Number:	7447-40-7
RTECS Number:	TS8050000
Concentration:	0.0 – 1.0 %
EC Number:	231-211-8
GHS Classification:	Acute Tox.(O) 5: H303, Aquatic (A) 3: H402

Product Name:	Sodium phosphate, Dibasic
CAS Number:	7558-79-4
RTECS Number:	WC4500000
Concentration:	0.0 – 5.0 %
EC Number:	231-448-7
GHS Classification:	Eye Damage 2: H319

Product Name:	Potassium phosphate, Monobasic
CAS Number:	7778-77-0
RTECS Number:	TC6615500
Concentration:	0.0 – 1.0 %
EC Number:	231-913-4
GHS Classification:	No data available

Product Name:	Water
CAS Number:	7732-18-5
RTECS Number:	ZC0110000
Concentration:	87.9 – 88.0 %
EC Number:	231-791-2
GHS Classification:	No data available

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice.	Consult a doctor and show this safety data sheet.

If inhaled.	Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
In case of skin contact.	Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor if symptoms occur. Wash clothing before reuse.
In case of eye contact.	Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined by a doctor.
If swallowed.	Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media	Use water spray, carbon dioxide, dry chemical powder or foam. A solid water stream may be inefficient.
5.2 Special hazards arising from the substance or mixture	In combustion, may emit toxic fumes.
5.3 Precautions for fire-fighters	Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

6. ACCIDENTIAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental precautions

Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and materials for containment and cleaning up

Cover spillage with suitable absorbent material. Transfer to a chemical waste container for disposal in accordance with local regulations.

6.4 Reference to other sections

For required PPE see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities.

Keep tightly closed. Protect from light. Store in a cool, dark and dry place.
Recommended storage temperature: Store at 4°C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters	No data available.

8.2 Exposure controls

Appropriate engineering controls	Ensure all engineering measures described under section 7 of MSDS are in place. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Ensure laboratory is equipped with a safety shower and eye wash station.
Personal protective equipment	
Eye/face protection	Use appropriate safety glasses.
Skin protection	Use appropriate chemical resistant gloves. Gloves should be inspected before use. Wash and dry hands thoroughly after handling.
Body protection	Wear appropriate protective clothing.
Respiratory protection	Use a NIOSH/MSHA-approved respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Purple to dark red liquid
Vapor pressure	No data available
Odor	No data available
Vapor density	No data available
Odor threshold	No data available
Relative density	No data available
pH	7.4
Solubility(ies)	Soluble in water
Melting / freezing point	No data available
Partition coefficient	No data available
Boiling point / range	No data available
Auto-ignition temperature	No data available
Flash point	No data available
Decomposition temperature	No data available
Evaporation rate	No data available
Viscosity	No data available
Flammability (solid, gas)	No data available
Explosive properties	No data available
Upper / lower flammability or explosive limits	No data available
Oxidising properties	No data available

9.2 Other safety information

No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity	Stable under recommended transport or storage conditions.
10.2 Chemical stability	Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions	Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.
10.4 Conditions to avoid	Heat, light.
10.5 Incompatible materials	Strong acids/alkalis, strong oxidising/reducing agents.
10.6 Hazardous decomposition products	Hydrogen chloride, phosphorus oxides, sodium oxides

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity	No data available
Skin corrosion/irritation	Classification criteria are not met based on available data
Serious eye damage/irritation	Classification criteria are not met based on available data
Respiratory or skin sensitization	Classification criteria are not met based on available data
Germ cell mutagenicity	Classification criteria are not met based on available data
Carcinogenicity	Classification criteria are not met based on available data
Reproductive toxicity	Classification criteria are not met based on available data
Specific target organ toxicity - single exposure	Classification criteria are not met based on available data
Specific target organ toxicity - repeated exposure	Classification criteria are not met based on available data
Aspiration hazard	Classification criteria are not met based on available data
Symptoms / Routes of exposure	
Inhalation:	There may be irritation of the throat with a feeling of tightness in the chest.
Ingestion:	There may be irritation of the throat.
Skin:	There may be mild irritation at the site of contact.
Eyes:	There may be irritation and redness.
Delayed / Immediate Effects:	No known symptoms.

Exposure may cause irritation to eyes, mucous membranes, upper respiratory tract and skin
To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

12. ECOLOGICAL INFORMATION

12.1 Toxicity	Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.
12.2 Persistence and degradability	No data available
12.3 Bioaccumulative potential	No data available
12.4 Mobility in soil	No data available
12.5 Results of PBT and vPvB assessment	No data available
12.6 Other adverse effects	No data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with National legislation.

Contaminated packaging	Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with National legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID and IATA.

14.1 UN-Number	Does not meet the criteria for classification as hazardous for transport.
14.2 UN proper shipping name	Does not meet the criteria for classification as hazardous for transport.
14.3 Transport hazard class(es)	Does not meet the criteria for classification as hazardous for transport.
14.4 Packaging group	Does not meet the criteria for classification as hazardous for transport.
14.5 Environmental hazards	This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.
14.6 Special precautions for users	No data available

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1272/2008.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	No data available
15.2 Chemical safety assessment	A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Copyright 2015 Cell Guidance Systems. This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet