Safety Data Sheet - Cover Page

The products listed below meet the criteria for classification as hazardous in accordance with The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). Please refer to the indicated Safety Data Sheet (SDS) for information concerning hazards and appropriate protective measures. SDS for products not classified as hazardous are available on request. Visit www.cellsignal.com for additional technical information and support.

Kit No.	Product name	
7722	Blue Loading Buffer Pack	
Kit Component No.	Product name	
Kit Component No.	Product name 3X Blue Loading Buffer	

SAFETY DATA SHEET (SDS): According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

SECTION 1. Identification

Product identifier

Product No. 7722-1

Product name 3X Blue Loading Buffer

Description The Blue Loading Buffer Pack is used to lyse cells for Western blotting analysis.

Other means of identification 7722M, 7722S.

Recommended use of the chemical and restrictions on use

Identified usesThis product is intended for research purposes only.

Uses advised againstThis product is not intended for use in diagnostic procedures or therapeutics.

This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.

3 Trask Lane

Danvers, MA 01923 TEL: +1 978 867 2300 FAX: +1 978 867 2400 www.cellsignal.com

Website www.cellsignal.com Email address support@cellsignal.com

Company phone number 978-867-2300

Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

GHS Label elements, including precautionary statements



Signal Word Danger

Hazard statement(s)

Causes serious eye damage Causes skin irritation

Precautionary Statement(s)

Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/eye protection/face protection

IF ON SKIN: Wash with plenty of soap and water If skin irritation occurs: Get medical advice/attention Take off contaminated clothing and wash before reuse

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Supplementary Hazard Information

Hazards not otherwise classified (HNOC) None

Unknown Acute Toxicity 1.99% of the mixture consists of ingredient(s) of unknown toxicity.

SECTION 3. Composition/information on ingredients

Common nameNo information availableSynonymsNo information available.

Chemical Name	CAS No.	Weight %
sodium dodecyl sulphate	151-21-3	5-10
glycerol	56-81-5	30-60

SECTION 4. First-aid measures

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while

rinsina.

Skin contact Consult a physician if necessary. Wash off immediately with soap and plenty of water

removing all contaminated clothes and shoes.

Inhalation Move to fresh air. Consult a physician. If not breathing, give artificial respiration.

Ingestion Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce

vomiting. If swallowed, do not induce vomiting - seek medical advice. Never give anything

by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

Advice for emergency responders

General advice If symptoms persist, call a physician. Show this safety data sheet to the doctor in

attendance. Do not breathe dust/fume/gas/mist/vapors/spray.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Other information

Ensure adequate ventilation. No information available.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to

properly labeled containers.

SECTION 7. Handling and storage

Precautions for safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage

Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of

conditions

children.

Packaging material Incompatible products No information available. Strong oxidizing agents.

SECTION 8. Exposure controls/personal protection

Control parameters

Chemical Name ACGIH TLV OSHA PEL NIOSH REL	
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glycerol TWA: 10 mg/m³ TWA: 15 mg/m³ (total) TWA: 5 mg/m³ (resp) 56-81-5 (vacated) TWA: 10 mg/m³ (total) (vacated) TWA: 5 mg/m³ (resp)

(total) = Total dust

Hygiene measures

(resp) = Respirable fraction

(vacated) = Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Tightly fitting safety goggles. Eye/face protection Wear protective gloves/clothing. Skin and body protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved Respiratory protection

> respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

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provided in accordance with current local regulations.

Do not eat, drink or smoke when using this product.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid

Appearance No information available Odor No information available

Color Blue

Odor Threshold No information available рΗ No information available No information available Melting point/freezing point Initial boiling point and boiling No information available

range

Flash point No information available No information available **Evaporation rate** Flammability (solid, gas) No information available No information available **Upper flammability limit** No information available Lower flammability limit No information available Vapor pressure Vapor density No information available Relative density No information available Solubility No information available Solubility in other solvents No information available Partition coefficient: n-octanol/waterNo information available **Autoignition temperature** No information available **Decomposition temperature** No information available **Explosive properties** No information available No information available Oxidizing properties **VOC** content No information available No information available **Viscosity** No information available **Density**

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions None under normal processing.
Hazardous polymerization None under normal processing.

Conditions to Avoid

No information available.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors: Sulfur oxides, Sodium oxides: Acrolein.

SECTION 11. Toxicological information

Information on likely routes of exposure

InhalationNot an expected route of exposure.Eye contactMay cause irreversible damage to eyes.

Skin contact Irritating to skin.

Ingestion Not an expected route of exposure. Low order of toxicity based on components.

Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxocological and physiological properties of this compound is not well defined.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
sodium dodecyl sulphate 151-21-3	= 1288 mg/kg (Rat)	= 580 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h
glycerol 56-81-5	= 12600 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing,

reddening and swelling accompanied by a stinging sensation and/or a feeling like that of

fine dust in the eyes.

CorrosivityNo information available.SensitizationNo information available.Mutagenic effectsNo information available.

Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identifiable

as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity
Developmental Toxicity
Teratogenicity
STOT - single exposure
STOT - repeated exposure
No information available.
No information available.
No information available.
No information available.

Target Organ Effects Eyes, Respiratory system, Kidney, Skin.

Neurological effects No information available. No information available. **Aspiration Hazard** Endocrine Disruptor Information No information available.

Unknown Acute Toxicity 1.99% of the mixture consists of ingredient(s) of unknown toxicity.

SECTION 12. Ecological information

Ecotoxicity

1.99% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

	Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
	sodium dodecyl sulphate 151-21-3	EC50: 3.59 - 15.6 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50: 1.31 mg/L (Cyprinus carpio) 96 h LC50: 4.62 mg/L (Oncorhynchus mykiss) 96 h	EC50: 1.8 mg/L (Daphnia magna) 48 h
Ī	glycerol 56-81-5	-	LC50: 51 - 57 mL/L (Oncorhynchus mykiss) 96 h	EC50: 500 mg/L (Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation Most components of this material are unlikely to bioaccumulate but some have not been

Mobility No information available

Chemical Name	Octanol-Water Partition Coefficient
sodium dodecyl sulphate 151-21-3	1.6
glycerol 56-81-5	-1.76

Other adverse effects

No information available.

SECTION 13. Disposal considerations

Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTOIN 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

All of the components in the product are on the following Inventory lists:

TSCA Complies

DSL -NDSL -

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
sodium dodecyl sulphate 151-21-3	Not Listed	Not Listed	Not Listed
glycerol 56-81-5	Listed	Listed	Listed

U.S. EPA Label Information

This product does not contain any substances regulated as pesticides.

SECTION 16. Other information

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET (SDS): According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

SECTION 1. Identification

Product identifier

Product No. 7722-2

Product name 30X Reducing Agent

Description The Blue Loading Buffer Pack is used to lyse cells for Western blotting analysis.

Other means of identification 7722M, 7722S.

Recommended use of the chemical and restrictions on use

Identified usesThis product is intended for research purposes only.

Uses advised againstThis product is not intended for use in diagnostic procedures or therapeutics.

This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.

3 Trask Lane

Danvers, MA 01923 TEL: +1 978 867 2300 FAX: +1 978 867 2400 www.cellsignal.com

Website www.cellsignal.com
Email address support@cellsignal.com

Company phone number 978-867-2300

Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2

GHS Label elements, including precautionary statements



Signal Word Warning

Hazard statement(s)

Causes skin irritation. Causes serious eye irritation.

Precautionary Statement(s)

Wash hands thoroughly after handling. Wear protective gloves/eye protection/face protection.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eve irritation persists: Get medical advice/attention.

Supplementary Hazard Information

Hazards not otherwise classified (HNOC) None

SECTION 3. Composition/information on ingredients

No information available Common name **Synonyms** No information available.

Chemical Name	CAS No.	Weight %
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	15-40

SECTION 4. First-aid measures

Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Eye contact

Consult a physician.

Skin contact Wash skin with soap and water.

Inhalation Move to fresh air.

Ingestion If swallowed, do not induce vomiting - seek medical advice.

Most important symptoms and effects, both acute and delayed

Irritating material.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

Advice for emergency responders

General advice For further assistance, contact your local Poison Control Center.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions

to protect themselves.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the

surrounding environment.

Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

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Explosion Data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Ensure adequate ventilation. Other information No information available.

Environmental precautions

See Section 12 for additional information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers. Methods for cleaning up

SECTION 7. Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage

conditions

No information available. Packaging material

Incompatible products None known based on information supplied.

SECTION 8. Exposure controls/personal protection

Keep containers tightly closed in a dry, cool and well-ventilated place.

Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Safety glasses with side-shields. Eye/face protection Skin and body protection Wear protective gloves/clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved

> respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Liquid Physical state

No information available **Appearance**

Odor Rotten-egg like Colorless Color

Odor Threshold No information available рΗ No information available Melting point/freezing point No information available Initial boiling point and boiling No information available

range

No information available Flash point **Evaporation rate** No information available Flammability (solid, gas) No information available Upper flammability limit No information available Lower flammability limit No information available No information available Vapor pressure Vapor density No information available Relative density No information available Solubility No information available Solubility in other solvents No information available Partition coefficient: n-octanol/waterNo information available **Autoignition temperature** No information available **Decomposition temperature** No information available **Explosive properties** No information available Oxidizing properties No information available **VOC** content No information available No information available **Viscosity Density** No information available

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions None under normal processing. None under normal processing. Hazardous polymerization

Conditions to Avoid

No information available.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

SECTION 11. Toxicological information

Information on likely routes of exposure

Inhalation This product exhibits very strong odor characteristics. **Eve contact** Expected to be an irritant based on components. Skin contact Expected to be an irritant based on components.

Ingestion Not an expected route of exposure.

Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxocological and physiological properties of this compound is not well defined.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
(R*,R*)-1,4-dimercaptobutane-2,3-di	= 400 mg/kg (Rat)	-	-
ol			
3483-12-3			

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing,

reddening and swelling accompanied by a stinging sensation and/or a feeling like that of

fine dust in the eves.

Corrosivity No information available. No information available. Sensitization Mutagenic effects No information available.

Carcinogenicity No component of this product present at levels greater than or equal to 0.1% is identifiable

as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.

No information available. Reproductive toxicity No information available. **Developmental Toxicity Teratogenicity** No information available. STOT - single exposure Respiratory system. STOT - repeated exposure No information available. **Target Organ Effects** Respiratory system, Eyes, Skin. No information available. **Neurological effects Aspiration Hazard** No information available. Endocrine Disruptor Information No information available.

SECTION 12. Ecological information

Ecotoxicity

16.15% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
(R*,R*)-1,4-dimercaptobutane-2,3-di	-	-	LC50: 27mg/L (Daphnia magna) 48
ol			h
3483-12-3			

Persistence and degradability No information available. **Bioaccumulation** No information available. No information available Mobility

Other adverse effects

No information available.

SECTION 13. Disposal considerations

Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTOIN 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

All of the components in the product are on the following Inventory lists:

TSCA Complies **DSL** Complies **NDSL** Complies

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard Yes **Chronic Health Hazard** No **Fire Hazard** No **Sudden Release of Pressure Hazard** No **Reactive Hazard** No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
(R*,R*)-1,4-dimercaptobutane-2,3-di	Not Listed	Not Listed	Not Listed
ol			
3483-12-3			

U.S. EPA Label Information

This product does not contain any substances regulated as pesticides.

SECTION 16. Other information

Issuing Date: 2014-01-31 **Revision Date: 2014-01-31**

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End of Safety Data Sheet