

SAFETY DATA SHEET

Elution Buffer Kit, Solution 2

1. Product and company identification

Product name : Elution Buffer Kit, Solution 2

Product code : BU07, BU07-L

Supplier's details : Lunaphore Technologies SA
 Route de Lully 5C, CH-1131
 Tolochenaz, Switzerland
 + 41 800 84 86 89

Distributor:

PHC Corporation
 2-38-5 Nishi-Shimbashi
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 Tel: +81-120-878-279
 Mail: wg-inq_epredia@ml.phchd.com

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Emergency telephone number (with hours of operation) : CHEMTREC:
 +81 3-4520-9637 (Local)

Product use : Professional use. Use in laboratories. Research.

2. Hazards identification

GHS Classification : SKIN IRRITATION - Category 2
 SERIOUS EYE DAMAGE - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD - Category 3

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Causes skin irritation.
 Causes serious eye damage.
 Causes damage to organs. (central nervous system (CNS))
 May cause damage to organs through prolonged or repeated exposure. (liver)
 Harmful to aquatic life.

Precautionary statements

General : Not applicable.

Prevention : P280 - Wear protective gloves. Wear eye or face protection.
 P273 - Avoid release to the environment.
 P260 - Do not breathe dust or mist.
 P270 - Do not eat, drink or smoke when using this product.
 P264 - Wash hands thoroughly after handling.

2. Hazards identification

- Response** : P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P362 + P364 - Take off contaminated clothing and wash it before reuse.
 P302 + P352 - IF ON SKIN: Wash with plenty of water.
 P332 + P313 - If skin irritation occurs: Get medical advice or attention.
 P305 + P351 + P338 + P310 - 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.
- Storage** : P405 - Store locked up.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : None known.

Other hazards which do not result in classification : None known.

3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number	Official Gazette notice reference number	
			CSCL	ISHL
Sodium dodecyl sulfate	10 - 20	151-21-3	2-1679	2-1679

4. First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Inhalation** : Causes damage to organs following a single exposure if inhaled.

4. First aid measures

- Skin contact** : Causes damage to organs following a single exposure in contact with skin. Causes skin irritation.
- Eye contact** : Causes serious eye damage.
- Ingestion** : Causes damage to organs following a single exposure if swallowed.
- Over-exposure signs/symptoms**
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire-fighting measures

- Suitable extinguishing media** : Use dry chemical, CO₂, alcohol-resistant foam or water spray (fog). Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Storage

Conditions for safe storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

8. Exposure controls/personal protection

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Occupational exposure limits

None.

Biological exposure indices

None known.

Individual protection measures

8. Exposure controls/personal protection

- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: Material: natural rubber (latex), neoprene rubber, nitrile rubber, PVC.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Clear. Colorless.
- Odor** : Not available.
- pH** : 9.1 [Conc. (% w/w): 1%]
- Melting point/freezing point** : Not available.
- Softening point** : Not available.
- Boiling point, initial boiling point, and boiling range** : >100°C (>212°F)
- Flash point** : Not available.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** : Not available.
- Relative vapor density** : Not available.
- Relative density** : Not available.
- Density** : 1.01 g/cm³
- Solubility in water** : Soluble.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not available.
- Particle characteristics**
- Median particle size** : Not applicable.

10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : Under normal conditions of storage and use, hazardous polymerization will not occur.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : Keep away from extreme heat and oxidizing agents.

Incompatible materials : Reactive or incompatible with the following materials:
Strong oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium dodecyl sulphate	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	1288 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Fluorination Buffer Kit, Solution 2	7084.0	N/A	N/A	N/A	N/A
sodium dodecyl sulphate	1288	2500	N/A	N/A	N/A

Conclusion/Summary : Based on available data, the classification criteria are not met.

Irritation/Corrosion

Conclusion/Summary

Skin : Causes skin irritation.

Eyes : Causes serious eye damage.

Respiratory : Not available.

Respiratory sensitization/Skin sensitization

Product/ingredient name	Route of exposure	Species	Result
sodium dodecyl sulphate	skin	Guinea pig	Not sensitizing [OECD 406]

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Not available.

Germ Cell Mutagenicity

11. Toxicological information

Product/ingredient name	Test	Experiment	Result
sodium dodecyl sulphate	OECD 476	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 478	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 471	Experiment: In vivo Subject: Bacteria	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
sodium dodecyl sulphate	Negative - Oral - NOEL [OECD 453]	Rat	>1125 mg/kg	2 years

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
sodium dodecyl sulphate	-	-	-	Rabbit	Route of exposure unreported: NOAEL = 300 mg/kg [OECD 416]	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
sodium dodecyl sulphate	Category 1	-	central nervous system (CNS)

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
sodium dodecyl sulphate	Category 2	-	liver

Aspiration hazard

Not available.

12. Ecological information

Ecotoxicity

Product/ingredient name	Result	Species	Exposure
sodium dodecyl sulphate	Acute EC50 53 mg/l	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 30 to 100 mg/l	Algae - Desmodesmus subspicatus	96 hours
	Acute EC50 117 mg/l	Algae - Pseudokirchneriella subcapitata	96 hours

12. Ecological information

	Acute EC50 3.59 to 15.6 mg/l	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute EC50 1.8 mg/l	Daphnia - Daphnia magna	48 hours
	Acute LC50 7.97 mg/l	Fish - Brachydanio rerio	96 hours
	Acute LC50 9.9 to 20.1 mg/l	Fish - Brachydanio rerio	96 hours
	Acute LC50 1.31 mg/l	Fish - Cyprinus carpio	96 hours
	Acute LC50 4.2 to 4.8 mg/l	Fish - Lepomis macrochirus	96 hours
	Acute LC50 4.5 mg/l	Fish - Lepomis macrochirus	96 hours
	Acute LC50 4.06 to 5.75 mg/l	Fish - Lepomis macrochirus	96 hours
	Acute LC50 4.3 to 8.5 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 4.62 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 4.2 mg/l	Fish - Oncorhynchus mykiss	96 hours
	Acute LC50 5.8 to 7.5 mg/l	Fish - Pimephales promelas	96 hours
	Acute LC50 10.2 to 22.5 mg/l	Fish - Pimephales promelas	96 hours
	Acute LC50 6.2 to 9.6 mg/l	Fish - Pimephales promelas	96 hours
	Acute LC50 8 to 12.5 mg/l	Fish - Pimephales promelas	96 hours
	Acute LC50 15 to 18.9 mg/l	Fish - Pimephales promelas	96 hours
	Acute LC50 22.1 to 22.8 mg/l	Fish - Pimephales promelas	96 hours
	Acute LC50 13.5 to 18.3 mg/l	Fish - Poecilia reticulata	96 hours
	Acute LC50 10.8 to 16.6 mg/l	Fish - Poecilia reticulata	96 hours

Conclusion/Summary : Harmful to aquatic life.

Persistence/degradability

Conclusion/Summary : There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
sodium dodecyl sulphate	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
sodium dodecyl sulphate	1.6	-	low

Mobility in soil : Not available.

Hazardous to the ozone layer : Not applicable.

Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

14. Transport information

	UN	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Label			
Packing group	-	-	-
Environmental hazards	No.	Marine Pollutant: No	No.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not applicable.

15. Regulatory information

Fire Service Law

None of the components are listed.

Industrial Safety and Health Act

Ordinance on the Prevention of the Hazard due to Specified Chemical Substances

None of the components are listed.

Substance(s) requiring labelling

None of the components are listed.

Chemicals requiring notification

None of the components are listed.

Guideline for Preventing Health Hazard by chemical substances (Carcinogenicity)

None of the components are listed.

Mutagen

15. Regulatory information

None of the components are listed.

Chemical Substances Control Law (CSCL)

Ingredient name	%	Status	Reference number
Sodium alkyl(C=8-18) sulfate	10 - 20	Priority assessment	214

Poisonous and Deleterious Substances

None of the components are listed.

Pollutant Release and Transfer Registers (PRTR) - Until March 2023

Ingredient name	%	Measured as	Status	Reference number
Sodium dodecyl sulfate	20		Class 1	275

Pollutant Release and Transfer Registers (PRTR) - From April 2023

Ingredient name	%	Measured as	Status	Reference number
Sodium dodecyl sulfate	20		Class 1	275

High Pressure Gas Control Law : Not applicable.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

- Australia** : All components are listed or exempted.
- Canada** : All components are listed or exempted.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory**: All components are listed or exempted.
- Japan** : **Japan inventory (CSCL)**:
All components are listed or exempted.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Thailand** : All components are listed or exempted.
- United States** : All components are active or exempted.
- Viet Nam** : All components are listed or exempted.

16. Other information

History

Date of printing : 01/11/2022

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Version : 2

Key to abbreviations

: ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 N/A = Not available
 SGG = Segregation Group
 UN = United Nations

Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
HAZARDOUS TO THE AQUATIC ENVIRONMENT - ACUTE HAZARD - Category 3	Calculation method

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.