

Safety Data Sheet
According to OSHA 29CFR 1910.1200

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

1.1 Product identifier	
Trade name:	Extraction Buffer
Part number:	EB17(11198, 12382)
1.2 Relevant identified uses of the substance or mixture and uses advised against:	
	Extraction buffer used with the Aflatoxin FREE test kit (P/N 11178; AQ-209 BG), and with the Aflatoxin Flex kit (P/N 12376; AQ-309). Not to be used for purposes other than those specified in product literature.
1.3 Details of the supplier of the safety data sheet	
Manufacturer/Supplier:	EnviroLogix Inc., 500 Riverside Industrial Pkwy. Portland ME 04103, USA
Information department:	Technical Service
1.4 Emergency telephone number:	(207) 797-0300

SECTION 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to OSHA 29CFR 1910.1200:

Flammable Solid category 2	H228	Flammable solid
Acute Toxicity Oral 4	H302	Harmful if swallowed
Acute Toxicity Inhalation 4	H322	Harmful if inhaled
Skin Irritation category 2	H315	Causes skin irritation
Serious eye damage category 1	H318	Causes serious eye damage
Specific Target Organ Toxicity Single Exposure category 3	H335	May cause respiratory irritation
Aquatic Toxicity-Chronic category 3	H412	Harmful to the environment with long lasting effects

2.2 Label elements

Labeling according to OSHA 29CFR 1910.1200:

Hazard pictograms :



Signal word: Danger

Hazard statements:
H228 Flammable solid.
H302 + H322 Harmful if swallowed or inhaled
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:
P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P304 + P340 IF INHALED: Remove to fresh air and keep comfortable for breathing.
P305 + P351 + P338 If in Eyes: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do. Continue rinsing.
P403 + P233 Store in a well ventilated place. Keep container tightly closed

2.3 Other hazards No additional hazards listed

SECTION 3. Composition/information on ingredients

3.1 Substances:	Not Applicable				
3.2 Mixtures	Extraction Reagent Powder (EB17)				
	Chemical name	CAS No	EC No	Amount (%)	Classification
	Sodium Lauryl Sulfate	151-21-3	205-788-1	60 to 85	OSHA 29CFR1910.1200 Flam. Sol. 2 H228; Acute Tox. Oral 4 H302; Acute Tox. Inhal. 4 H322; Skin Irrit. 2 H315; Eye Dam. 1 H318; STOT SE 3 Resp. H335; Aquatic Tox. Chronic 3 H412;
The full text of hazard (H) statements is shown in section 16					

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures	
After inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
After skin contact	Flush skin with water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse.
After eye contact	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Seek medical attention if irritation develops.
After swallowing	Do NOT induce vomiting unless directed to do so by medical personnel. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. Never give anything by mouth to an unconscious person.
4.2 Most important symptoms and effects, both acute and delayed	Difficulty breathing, Skin irritation, Eye irritation Do NOT induce vomiting unless directed to do so by medical personnel. If large quantities of this material are swallowed, call a physician immediately.
4.3 Indication of any immediate medical attention and special treatment needed.	No special treatment is required

SECTION 5. Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing agents:	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
5.2 Special hazards arising from the substance or mixture :	When heated to decomposition it emits toxic fumes of sulfur oxides, and sodium oxide.
5.3 Advice for firefighters	
Protective equipment:	Wear appropriate PPE for fire conditions including self-contained breathing apparatus for firefighting if necessary. Use water spray to cool unopened containers.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Assure adequate ventilation. Remove all sources of ignition. Evacuate personnel to a safe area. Avoid breathing dust.
6.2 Environmental precautions:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
6.3 Methods and material for containment and clean up:	Sweep up and shovel. Prevent entry into sewers, dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.
6.4 Reference to other sections:	For safe handling refer to Section 7. For information on PPE refer to Section 8. For disposal, refer to Section 13.

SECTION 7. Handling and Storage

7.1 Precautions for safe handling: Keep away from heat. Keep away from sources of ignition. Prevent electrostatic buildup. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

7.2 Conditions for safe storage, including any incompatibilities: Keep away from incompatibles such as oxidizing agents. Keep container tightly closed. Keep container in a cool, well-ventilated area.

7.3 Specific end use(s): Besides the uses described in Section 1.2 there are no other specific uses

SECTION 8. Exposure Controls/ Personal Protection

8.1 Exposure controls
 Additional information about design of technical systems: None required

Exposure limits
 Components with limit values that require monitoring at the workplace:

Chemical	Exposure Limits
Sodium Lauryl Sulfate	OSHA Observe limits for particulate not otherwise regulated: 15 mg/m ³ total dust, 5 mg/m ³ respirable fraction (OSHA PEL) 10 mg/ m ³ inhalable particulate, 3 mg/m ³ respirable particulate. (ACGIH TLV)
	EH40/2005 Inhalable dust: 10mg/m ³ ; Respirable dust: 4mg/m ³

Exposure controls - Engineering Controls:

Personal protective equipment

Facilities using or storing this material should be equipped with an eyewash and safety shower. Provide local exhaust or general dilution ventilation.

Breathing equipment..... Appropriate respiratory protection should be determined according to local conditions using risk analysis protocols. An approved disposable air-purifying particulate respirator may be used as a backup to engineering controls. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protection of hands..... Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
 The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Eye protection..... Safety glasses with side shields; goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Eye and face protection regulations are described by OSHA (US) in 29 CFR 1910.133. Do not wear contact lenses when working with chemicals.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties	Extraction Reagent Powder (EB17)– no CAS number
Appearance:	Solid –Powder, White
Odor:	Odorless
Odor threshold:	not applicable
pH :	9.5 (1% sol/water)
Melting point/freezing point:	
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Evaporation rate:	No data available
Flammability(solid, gas):	May be combustible at high temperature
Upper/lower flammability or explosive limits:	No data available
Vapor pressure	No data available
Vapor density:	No data available
Relative density	No data available
Solubility(ies):	Soluble in water
Partition coefficient: n-octanol/water;	No data available
Auto-Ignition Temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing Properties	not applicable
9.2 Other information	
Products of Combustion:	Carbon oxides (CO, CO ₂), sulfur oxides (SO ₂ , SO ₃ ...).
Fire Hazards in Presence of Various Substances:	Slightly flammable to flammable in presence of heat. Risks of explosion of the product in presence of mechanical impact: Not available.

SECTION 10. Stability and reactivity

10.1 Reactivity:	Not self-reactive.
10.2 Chemical stability	Stable under normal temperatures and pressures
10.3 Possibility of hazardous reactions :	Reaction with strong oxidizers may cause fire.
10.4 Conditions to avoid :	Heat, flames, and sparks
10.5 Incompatible materials:	Oxidizing agents (eg bleach).
10.6 Hazardous decomposition products:	Carbon monoxide, carbon dioxide, sulfur oxides, carbon dioxide, nitrogen oxides, silicone Oxides.

SECTION 11. Toxicological information

Acute effects (toxicity tests): Sensitization: Additional toxicological information:	Sodium lauryl sulfate - 151-21-3		
	Acute oral toxicity	LD50= 1200 mg/kg	rat
	Acute dermal toxicity	LD50= > 2000 mg/kg	rabbit
	Acute inhalation toxicity	LC50= 3900 mg/m ³ , 1hour	rat
No sensitizing effects known CMR (carcinogenicity, mutagenicity and toxicity for reproduction) – no CMR effects.			

SECTION 12. Ecological information

12.1 Toxicity: Sodium Lauryl Sulfate Aquatic toxicity: Note: Aquatic Toxicity of mixture is based on Sodium Lauryl Sulfate;	Aquatic toxicity LC50	Effect dose	Exposure	Species
	Acute fish toxicity	10.2-22.8 mg/l	96 hours	Pimephales promelas
	Acute daphnia toxicity	1.8 mg/l	48 hours	daphnia magna
	Acute algae toxicity	117 mg/l	96 hours	Pseudokirchneriella subcapitata
		53 mg/l	96 hours	Desmodesmus subspicatus
	30-100 mg/l	96 hours	Desmodesmus subspicatus	
12.2 Persistence and degradability :	Biodegradability Result: 90 % - Readily biodegradable. Ratio BOD/ThBOD 95.9 %			
12.3 Bio accumulative potential :	Cyprinus carpio (Carp) - 72 h Bioconcentration factor (BCF): 3.9 - 5.3			
12.4 Mobility in soil :	Not available			
12.5 Results of PBT and vPvB assessment:	Not available as a chemical safety assessment, not required/not conducted.			
12.6 Other adverse effects	No others listed.			

SECTION 13. Disposal considerations

Waste treatment methods/ Uncleaned packaging: Dispose of contents and containers in accordance with local, state and federal regulations.

SECTION 14. Transport information

14.1 UN-Number DOT, ADR, ADN, IMDG, IATA :	UN1325
14.2 UN proper shipping name DOT, ADR, ADN, IMDG, IATA :	FLAMMABLE SOLIDS, ORGANIC, N.O.S. (Sodium dodecyl sulfate)
14.3 Transport hazard class(es)	4.1
Class (DOT, ADR, ADN, IMDG, IATA):	PG111
14.4 Packing group (DOT, ADR, IMDG, IATA):	
14.5 Environmental hazards	Not applicable.
Marine pollutant:	Not applicable.
14.6 Special precautions for user :	Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	

SECTION 15. Regulatory information**15.1 Safety, health and environmental regulations****HMIS Classification (US).....**

Health hazard: 2 , Flammability: 1 , Physical Hazards: 0

US Federal Regulations

TSCA	Listed.
Health and Safety Reporting List	Not listed
CERCLA	Not listed
SARA Section 302 (Extremely Hazardous Substances)	Not listed
Clean Air Act	Not listed
Clean Water Act	
OSHA	

European/International Regulations

European labeling in accordance with EC Directives

NFPA Rating (US)

Health hazard: 2 , Fire: 1 , Reactivity Hazard: 0

TSCA 8(b) inventory: Sodium lauryl sulfate

Canada – DSL/NDSL**Canada – WHMIS****Other**

This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 205-788-1)

Listed

CLASS D-2B: Material causing other toxic effects (TOXIC).

China: Listed on National Inventory. Japan: Listed on National Inventory (ENCS).

Korea: Listed on National Inventory (KECI). Philippines: Listed on National Inventory (PICCS). Australia: Listed on AICS.

15.2 Chemical safety assessment

Not carried out.

SECTION 16. Other information

This information is true based on our present knowledge. However, EnviroLogix makes no representation of its accuracy or completeness. Persons receiving this information must exercise their independent judgment in determining the product's safety and suitability for its intended use. This document shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

EHS Department

EnviroLogix Inc.


Code Definitions:

H228	Flammable solid.
H302 + H322	Harmful if swallowed or inhaled
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
P304 + P340	IF INHALED: Remove to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes; remove contact lenses if present and easy to do. Continue rinsing.
P403 + P233	Store in a well ventilated place. Keep container tightly closed

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

1.1 Product identifier	Trade name: Part number:	DB 5 Dilution Buffer 11150 (KR-266)
1.2 Relevant identified uses of the substance or mixture and uses advised against application of the substance / the preparation :	Laboratory chemicals; kit component. Not to be used for purposes other than those specified in product literature.	
1.3 Details of the supplier of the safety data sheet	Manufacturer/Supplier:	EnviroLogix Inc., 500 Riverside Industrial Pkwy. Portland ME 04103, USA Phone: (207) 797-0300
1.4 Emergency telephone number:	(207) 797-0300 Technical Service	

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture	Classification according to 29CFR 1910.1200:	Eye Damage Category 1 Aquatic Toxic, Chronic Category 2
2.2 Label elements	Labeling according to 29CFR 1910.1200:	
	Pictogram:	
	Signal word:	Warning
	Hazard Statements:	H318 Causes serious eye damage
	Precautionary Statements:	H411 Toxic to aquatic life with long lasting effects P264 Wash hands thoroughly after handling P280 Wear protective gloves/protective clothing/eye Protection/face protection P305+P351+P338 IF IN EYES: Rinse cautiously with Water for several minutes. Remove contact lenses If present and easy to do. Continue rinsing. P337+P313 IF eye irritation persists: Get medical attention/advice
2.3 Other Statements	Restricted to professional users	

SECTION 3. Composition/information on ingredients

3.2	Mixture				
	Chemical name	CAS No	EC No	Classification According to 29CFR 1910.1200	Amount (%)
	Sodium Tetraborate Decahydrate	1303-96-4	215-540-4	H360 Rep 1B	1 – 5 %

p-tertiary Octylphenoxy polyethyl alcohol (Triton X-100)	9002-93-1		H302 Acute Tox. Oral 4 H315 Skin Irrit. 2 H318 Eye Dam. 1 H411 Aquatic Chronic 2	1 %
Surfynol	9014-85-1		H315 Skin irritation 2 H318 Eye damage 1 H335 STOT SE 3	2 %
1,2 Benzisothiazolin-3-one (Proxel- GXL)	2634-33-5	220-120-9	H302 Acute Tox. 4; H315 Skin Irrit. 2 H317 Skin Sens. 1 (C≥0.05%) H318 Eye Dam. 1 ; H400 Aquatic Acute 1	0.048 %

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation :	<u>In case of inhalation.</u> Remove to fresh air. If not breathing give artificial respiration. Get medical attention immediately.
After skin contact :	<u>In case of skin contact.</u> Remove contaminated clothing and shoes immediately. Wash affected area with mild soap or detergent for at least 10 minutes or until no evidence of chemical remains.
After eye contact :	<u>In case of eye contact.</u> immediately flush eyes with plenty of water for at least 15 minutes. Lifting eyelids occasionally, until no evidence of chemical remains. Get medical attention immediately.
After swallowing :	<u>In case of ingestion.</u> DO NOT Induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call a physician immediately.

4.2 Most important symptoms and effects, both acute and delayed:

None

4.3 Indication of any immediate medical attention and special treatment needed:

None

SECTION 5. Firefighting measures

5.1 Extinguishing media:	CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
5.2 Special hazards arising from the substance or mixture:	None
5.3 Advice for firefighters:	Wear protective gear appropriate for fire conditions including respiratory protective gear.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:	In the case of spilled mixture wear gloves to prevent skin contact. In the case of a large spill, additional protection is recommended.
6.2 Environmental precautions:	Do not discharge mixture to sewer system or waterways.
6.3 Methods and material for containment and cleanup:	Absorb in paper towel and discard in appropriate waste. Clean with water afterwards. Large spills may be neutralized with dilute solutions of sodium carbonate or calcium oxide.
6.4 References to other sections:	For safe handling refer to Section 7. For information on PPE refer to Section 8. For disposal refer to Section 13

SECTION 7. Handling and storage

7.1 Precautions for safe handling:	Practice good chemical hygiene when handling. Avoid contact with eyes, skin, and clothing.
7.2 Conditions for safe storage, including any Incompatibilities:	Store in tightly closed, non-metal container, in a corrosive compatible area. Prevent direct sunlight and heat. Store in well aired storage rooms.
7.3 Specific end use(s):	Apart from the uses mentioned in section 1.2, no other specific uses are stipulated

SECTION 8. Exposure controls/personal protection

8.1 Exposure limits:

Components with limit values that require monitoring at the workplace:

	EH40/2005	OSHA
Sodium Tetraborate Decahydrate	8 Hr TWA = 5mg/m ³	8 Hr TWA = 10 mg/m ³

8.2 Exposure Controls:

8.2.1 Engineering controls

Facilities using this mixture should be equipped with an eyewash and safety shower. Use general or local exhaust ventilation to keep airborne concentrations below permissible exposure limits.

8.2.2 General protective and hygienic measures:

The usual precautionary measures should be adhered to when handling chemicals.

Eye Protection:

Safety glasses with side shields, goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU). Eye and face protection regulations are described by OSHA (US) in 29CFR1910.133. Do not wear contact lenses when working with chemicals

Hand Protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Breathing Equipment:

Appropriate respiratory protection should be determined according to local conditions using risk analysis protocols. An approved disposable air purifying particulate respirator may be used as a backup to engineering controls. Always use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

8.2.3 Environmental exposure controls:

Contain spills, do not allow into environment

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties:

a) Appearance:	Clear liquid, colorless to slight yellow.
b) Odor:	None
c) Odor Threshold:	No Data Available
d) pH:	8.6
e) Melting point/freezing point:	No Data Available
f) Boiling point/Boiling range:	No Data Available.
g) Flash point:	Not applicable.
h) Evaporation rate:	No Data Available

i) Flammability (solid, gaseous):	No Data Available
j) Upper/lower flammability or explosive limits:	No Data Available
k) Vapor pressure:	No Data Available
l) Vapor density	No Data Available
m) Relative density:	No Data Available
n) Solubility(ies):	Fully miscible, water.
o) Partition Coefficient: n-Octanol/water:	No Data Available
p) Auto-ignition temperature:	No Data Available
q) Decomposition temperature:	No Data Available
r) Viscosity:	No Data Available
s) Explosive properties:	No Data Available.
t) Oxidizing properties:	No Data Available
9.2 Other information:	No further relevant information available.

SECTION 10. Stability and reactivity

10.1 Reactivity:	No data available
10.2 Chemical Stability:	Stable under normal temperatures and pressures.
10.3 Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid:	No specific data
10.5 Incompatible materials:	No Data Available.
10.6 Hazardous decomposition products:	Under normal conditions of storage and use, hazardous decompositions products should not be produced.

SECTION 11. Toxicological information

Information on Toxicological Effects	
Triton X-100	
Acute toxicity:	Oral LD50 –Rat- 1800mg/kg Dermal LD50- Rabbit- 8000 mg/kg
Sensitization:	No sensitizing effects known
CMR (carcinogenity, mutagenicity and toxicity for reproduction) effects:	No CMR effects.
Additional toxicological information:	No Additional Information

SECTION 12. Ecological information

12.1 Toxicity:	
Triton X-100	Fish: LC50 Pimephales promelas (fathead minnow) – 8.9mg/l – 96.0 hr Daphnia: EC50 – Daphnia – 26 mg/l – 48 hr
12.2 Persistence and degradability :	No Data Available
12.3 Bio accumulative potential:	No Data Available
12.4 Mobility in soil :	No Data Available
12.5 Results of PBT and vPvB assessment:	Not available as a chemical safety assessment, not required/not conducted.
12.6 Other adverse effects:	No Data Available

SECTION 13. Disposal considerations

Waste treatment methods:	Contact a licensed professional waste disposal service to dispose of this material. Disposal of surplus or waste solutions must be in accordance with applicable local, state, and national laws and regulations.
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SECTION 14. Transport information

14.1 UN-Number DOT, ADR, ADN, IMDG, IATA :	Not Hazardous for Transport
14.2 UN proper shipping name DOT, ADR, ADN, IMDG, IATA :	Not Hazardous for Transport
14.3 Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA):	Not Hazardous for Transport
14.4 Packing group (DOT, ADR, IMDG, IATA):	Not Hazardous for Transport
14.5 Environmental hazards	No environmental hazard.
14.6 Special precautions for user :	None
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code:	No information available.

SECTION 15. Regulatory information

15.1 Safety, health, and environmental regulations	
US Federal Regulations	
OSHA	Not a hazardous material
SARA 313	Not listed
US State Regulations	
European/International Regulations	
European labeling in accordance with EC Directives	Not hazardous according to European directives
15.2 Chemical Safety Assessment	Not carried out

SECTION 16. Other information

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EHS Department
EnviroLogix Inc.

Codes:

H302	Harmful if swallowed
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes Serious Eye Damage
H335	May cause respiratory irritation
H411	Toxic to Aquatic Life with Long Lasting Effects