

Material Safety Data Sheet

1. Company/Undertaking Identification

Supplier: Life Technologies
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LIFE TECHNOLOGIES LIMITED
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301-431-8585
Outside of the U.S. ++1-301-431-8585

For research use only. Not intended for human or animal diagnostic or therapeutic uses

2. Identification of the substance/mixture

Product name: GMO Extraction Kit- Lysis Buffer 1
Product code: A24400

3. Hazards Identification

Hazard symbols of products

Directive 1999/45/EC

Symbols: Xi R36

GHS Directive 1272/2008/EC

GHS Symbols: GHS02, GHS07 and GHS08

Signal word DANGER

Hazard identification Hazard classes/categories

H226 Flam	Liq. 3
H302	Acute Tox. 4 oral
H315	Skin Irrit. 2
H317	Skin Sens. 1A/1B
H319	Eye Irrit. 2
H334	Resp. Sens. 1A/1B
H336, H335	STOT SE 3

Hazard descriptions

Possible Hazards from physicochemical Properties: In the case of pH values are less than 5 or higher than 9 then it is irritant.

Information pertaining to particular Risks to Human and possible Symptoms: Cause after inhalation of vapours/dust, skin contact, impairments of health when ingested in small quantities. May cause sensitization by skin contact, also in repeated contact of small amounts. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Kit contains small amounts of enzymes, which may cause sensitization by direct and repeated contact.

Information pertaining to particular Risks to the Environment. Other Hazards: Flammable properties. Vapour forms explosive mixtures with air.

Hazard descriptions of the components

4 x 500 mL of Lysis buffer 1

Classification according to Regulation [EC] No 1272/2008 [EU-GHS/CLP]

Acute toxicity, Oral [Category 4]

Skin irritation [Category 2]

Serious eye damage [Category 1]

Specific target organ toxicity - single exposure [Category 3]

Acute aquatic toxicity [Category 1]

Chronic aquatic toxicity [Category 1]

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Harmful if swallowed. Irritating to respiratory system and skin. Risk of serious damage to eyes. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Label elements

Labelling according Regulation [EC] No 1272/2008 [CLP]

Pictogram



Signal word: *Danger*

Hazard statement[s]

H302

Harmful if swallowed.

H315

Causes skin irritation.

H318

Causes serious eye damage.

H335

May cause respiratory irritation.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement[s]

- P261 *Avoid breathing dust.*
P273 *Avoid release to the environment.*
P280 *Wear protective gloves/ 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.

- P501 *Dispose of contents/ container to an approved waste disposal plant.*

*Supplemental Hazard None
Statements*

According to European Directive 67/548/EEC as amended.

R-phrase[s]

- R22 *Harmful if swallowed.*
R37/38 *Irritating to respiratory system and skin.*
R41 *Risk of serious damage to eyes.*
R50/53 *Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.*

S-phrase[s]

- S26 *In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.*
S39 *Wear eye/face protection.*
S60 *This material and its container must be disposed of as hazardous waste.*
S61 *Avoid release to the environment. Refer to special instructions/ Safety data sheets.*

FIRST AIDS MEASURES

General Information: Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice. Take to a doctor, in a raised position if there are breathing difficulties.

Eye contact: After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

Inhalation of vapours: After inhalation of foam or vapour fresh air should be inhaled. Keep airways free. Administer a Dexamethasone spray as soon as possible. Ensure quiet, warmth, and provide resuscitation if necessary. In the event of respiratory distress ensure that the patient inhales oxygen. Secure the breathing, heart and circulatory function.

Skin contact: Remove contaminated clothing immediately. Rinse the affected skin or mucous membrane thoroughly for min. 15 minutes under running water. (If possible) use soap. Avoid neutralisation. Then apply a loose bandage.

Ingestion: After oral intake lots of water should be drunk after it has been ingested

Further Medical Treatment/Attention

After SKIN CONTACT rinse with water for a long time. Apply glucocorticosteroides following inflammatory reactions. Inform patient respectively further measures and the possibility of long-term damages.

Specific effects

Carcinogenic effects: none

Mutagenic effects: none

Reproductive toxicity: none

Sensitisation: none

Target Organ Effects: No known effects under normal use conditions

Fire-fighting measures

Suitable extinguishing media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like FOAM, WATER SPRAY, DRY POWDER, CARBON DIOXIDE can be used.

Hazardous decomposition products

Formation of hazardous and caustic vapour-air mixtures possible. Danger for environment **only in the event of a large-scale leakage** or formation of hazardous substances.

Special protective equipment for fire-fighters

No, for listed product. For great amount - if necessary - protective breathing apparatus which is independent of the ambient air (isolated equipment), and sealed protective clothing is necessary in the event of a large-scale formation of toxic substances.

Accidental release measures

Personal precautions

Do not breathe vapours. Wear suitable protective gloves. Wear eye protection. Regular staff training is necessary, indicating hazards and precautions on the basis of operating instructions. Restrictions on activity must be observed.

Environmental precautions

Try to prevent the material from entering drains or water courses.

Methods for cleaning up

Bind any escaping liquid with universal binder. And dispose in accordance to local regulations for the disposal of hazardous chemicals. Clean any contaminated equipment and floors with plenty of water. Collect small amounts of leaked liquid and flush with water into drains.

Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment.

Storage conditions

See product label for specific storage requirements. Keep original product packages tightly closed during handling and storage

EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits: Not available

Personal protection

Eye protection

Safety glasses with side-shields.

Hand protection

Wear suitable gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection

Provide adequate ventilation.

Skin protection

Lab coat

Personal Hygiene

Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

Physical and chemical properties

General Information

Color: colourless

Odor: odorless

Appearance: liquid

Safety relevant Basis Data

Melting point: 237 to 243°C

Stability and reactivity

Conditions to avoid: If on label. When indicated in packing insert.

Materials to avoid: Avoid contact with strong acids or alkalines. Can form very reactive substances with oxidizing agents.

Hazardous Decomposition Products: In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

Toxicological information

Following information is valid for pure chemicals. Quantitative data on the toxicity of this product are not available.

Lysis Buffer 1

Ecotoxicity Not available.

Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the product itself.

Ecological information

We have no quantitative data concerning the ecological effects of this product. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Environmental precautions

Try to prevent the material from entering drains or water courses.

Disposal methods

Dispose of in accordance with local regulations.

Transport information

Class 3 III, excepted quantities [≤ 30 mL/ $\Sigma \leq 1$ L] = ADR/ IATA E1

Regulatory information

International Regulations

According 1999/45/EC small amounts of harmful and highly flammable preparations/mixtures have partly/completely exemption from labelling (no symbols F, O, Xn, Xi, N and no R and S phrases are necessary) until **25-125 mL/g**. This labelling exemption is NOT valid for sensibilizing mixtures.

According GHS inner packages must be only labelled with symbol[s] and product identifier.

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL or 125 g**. This labelling exemption is NOT valid for sensibilizing substances. The irritant hazard should be eliminated, because of buffer chemicals inside.

Lysis Buffer 1

Hazard symbol:



Clasification: Harmful

Risk phases:

R22 Harmful if swallowed.

R36/38 Irritating to eyes and skin.

Safety phases:

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S39 Wear eye/face protection.

Contains 1-hexadecanaminium, n,n,n-trimethyl-, bromide

Other information

List of R and H phrases

R10	Flammable.
R22	Harmful if swallowed.
R36	Irritating to eyes.
R36/37/38	Irritating to eyes, respiratory system and skin.
R36/38	Irritating to eyes and skin.
R42	May cause sensitization by inhalation.
R67	Vapours may cause drowsiness and dizziness.

List of relevant H phrases

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.

Training Advice

Multiple safety training of staffs about danger and protection by using hazards in working area. Additionally training and introduction of staffs for using these products.

Recommended Restriction on Use
Only for professional user

Disclaimer: This MSDS has been prepared using information from sources considered technically reliable. It should not be relied upon as a product specification. The company makes no warranty of any kind, expressed or implied, concerning the safe use of this material in your process or in combination with other chemical substances. Every user of the product is responsible for evaluating its own processes and conditions of use and selecting appropriate protective measures for employee exposure.