

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

ELISA Kit Assay (Product code containing #KE symbols)

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommend use	For research use only
Uses advised against	No information available

1.3 Supplier Identification Assay

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Section 2: Hazards identification

2.1 Classification of the substance or mixture

Classification of the substance or mixture
Not classified.

GHS label elements, including precautionary statements

Hazard pictogram(s) – No symbol

Signal word – No signal word

Hazard statement(s) – None

Precautionary statement(s) – None

Prevention – None

Response – None

Storage – None

Disposal – None

Other hazards which do not result in classification

No data available

Section 3: Composition/information on ingredients

Product Name: Enzyme Linked Immunosorbent Assay Reagent ELISA Reagent

Ingredient	Common names and synonyms	CAS No.	EC No.	% [Weight]
Water	Water	7732-18-5	231-791-2	78.39%
Sodium chloride	Sodium chloride	7647-14-5	231-598-3	14.16%
Sucrose	Sucrose	57-50-1	200-334-9	9 2.28%
Poly(oxy-1,2-ethanediyl), α -hydro- ω -hydroxy- Ethane-1,2-diol, ethoxylated	Poly (ethylene glycol) - 4000	25322-68-3	500-038-2	1.33%
Potassium sodium tartrate	Potassium sodium tartrate tetrahydrate	6381-59-5	613-385-0	1.07%
Phosphoric acid, sodium salt, hydrate (1:2:12)	disodium hydrogen phosphate	10039-32-4	600-088-6	0.63%
Glycerol	Glycerol	56-81-5	200-289-5	0.51%
Trisodium citrate	Sodium citrate	68-04-2	200-675-3	0.42%
2-Pyrrolidinone, 1-ethenyl-, homopolymer	PVP40	9003-39-8	618-363-4	0.35%
Potassium dihydrogenorthophosphate	Potassium dihydrogen phosphate	7778-77-0	231-913-4	0.05%

Section 4: First aid measures

4.1 Description of first aid measures

General advice

If symptoms persist, call a physician.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. If symptoms persist, call a physician.

Inhalation

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

Ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person..

4.2 Most important symptoms and effects, both acute and delayed

Main symptoms No data available.

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

to physician No data available.

Section 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

Extinguishing media which shall not be used for safety reasons

No information available.

5.2 Special hazards None in particular.

5.3 Advice for fire-fighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6: Accidental release measurements

6.1 Personal precautions

Ventilation.

Collect leaking and spilled liquid in covered containers as far as possible.

Absorb remaining liquid in sand or inert absorbent.

Then store and dispose of according to local regulations..

6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so.

Do not let the chemical enter drains.

Discharge into the environment must be avoided.

6.3 Methods for containment and cleaning up

Collect and arrange disposal.

Keep the chemical in suitable and closed containers for disposal.
 Remove all sources of ignition.
 Use spark-proof tools and explosion-proof equipment.
 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

Section 7: Handling and storage

7.1 Advice on safe handling

Handling in a well ventilated place. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools.
 Prevent fire caused by electrostatic discharge steam.

7.2 Storage conditions

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

Section 8: Exposure controls/personal protection

8.1 Personal Protection

Eye/face protection	Wear safety goggles.
Skin protection	Handle with gloves. Wash and dry hands.
Respiratory protection	If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

8.2 Control Parameters

Occupational Exposure limit values	Pure CAS 56-81-5: MAK: (inhalable fraction): 200 mg/m ³ ; peak limitation category: I(2); pregnancy risk group: C
Biological limit values	No data available.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Colourless transparent liquid
Odour	Weak odour
Melting point/freezing point	Pure CAS 7732-18-5: 0 °C; pure CAS 7647-14-5: 801 °C. Atm. press.: 1 atm.; pure CAS 57-50-1: 190-192°C; pure CAS 6381-59-5: 70-80°C; pure CAS 7447-40-7: 770-773°C; pure CAS 10039-32-4: 35°C; pure CAS 56-81-5: 18°C; pure CAS 68-04-2: >300°C; pure CAS 7778-77-0: 253°C

Boiling point or initial boiling point and boiling range	Pure CAS 7732-18-5: 100°C(lit.);pure CAS 7647-14-5: 1465°C/1 atm(lit.);pure CAS 57-50-1: 697.1°C at 760 mmHg;pure CAS 6381-59-5: 399.3°C at 760 mmHg;pure CAS 7447-40-7: 146°C;pure CAS 10039-32-4: 158°C at 760 mmHg;pure CAS 56-81-5: 290°C;pure CAS 7778- 77-0: > 449.85°C. Atm. press.:Pa.
Flammability	Non flammable
Lower and upper explosion limit/flammability limit	No data available
Flashpoint	No data available
Auto-ignition temperature	Pure CAS 56-81-5: 393°C
Decomposition temperature	No data available
pH Value	Pure CAS 7447-40-7: 7. Remarks:Temperature and concentration not reported.;pure CAS 68-04-2: 8.4. Remarks:Ambient temperature.;pure CAS 7778-77-0: Between 4,2 and 4,8 (1 % solution)
Kinematic	Pure CAS 56-81-5: dynamic viscosity (in mPa s) = 1 412. Temperature:20°C.;dynamic viscosity (in mPa s) = 612. Temperature:30.0°C.;dynamic viscosity (in mPa s) = 14.8. Temperature:100.0°C.
Solubility	Pure CAS 7647-14-5: In water: 317 g/L. Temperature:20 °C. pH:>= 7 - <= 10. Remarks:At 1 vol%.;pure CAS 57-50- 1: Solubility in water, g/100 ml at 25°C: 200 ;pure CAS 6381-59-5: In water: 630 g/L (20 °C);pure CAS 7447-40-7: Solubility in water at 20°C: good ;pure CAS 10039-32-4: In water: 218 g/L (20 °C);pure CAS 56-81-5: Solubility in water: miscible;pure CAS 68-04-2: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS 7778-77-0: Solubility in water, g/100ml: 22
Density/Relative	Pure CAS 7732-18-5: 1.000g/mL at 3.98°C(lit.);pure CAS 7647-14-5: 2.16. Temperature:25 °C.;pure CAS 57-50-1: 1.6 g/cm ³ ;pure CAS 6381-59-5: 1.79;pure CAS 7447-40-7: 1.98 g/cm ³ ;pure CAS 10039-32-4: 1.52 g/cm ³ ;pure CAS 56-81-5: 1.26;pure CAS 68-04-2: 1.857.Temperature:20 °C.;pure CAS 7778-77-0: 2.34 g/cm ³
Vapour Pressure	pure CAS 7732-18-5: 3 mmHg (37 °C);pure CAS 7647- 14-5: 1 mmHg (865 °C);pure CAS 56-81-5: 0.01 Pa(25°C);pure CAS 68-04-2: 0 Pa. Temperature:25 °C.

Section 10: Stability and reactivity

10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Precautionary Statements

Wash hands thoroughly after handling. Wear protective gloves, clothing and eye and face protection.

10.4 Conditions to avoid

None known based on information supplied.

10.5 Incompatible materials

None known based on information supplied.

10.6 Hazardous decomposition products None known based on information supplied.

10.7 Hazardous polymerization

Hazardous polymerization does not occur.

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Oral	Pure CAS 25322-68-3: LD50 - rat (female) - > 2 000 mg/kgbw.; pure CAS 7447-40-7: LD50 - rat (female) - ca. 3 020 mg/kgbw. Remarks: Death occurred in less than 2 hours after dosing due to respiratory failure and prostration was the most common pre-mortem clinical sign.; pure CAS 56-81-5: LD50 Rat oral 12.6 g/kg; pure CAS 68-04-2: LD50 - mouse (male/female) - 5 400 mg/kgbw. Remarks: Observation limited to 10 days.; pure CAS 7778-77-0: LD50 Mouse oral 2820 mg/kgbw.
Skin contact	Pure CAS 25322-68-3: LD50 - rat (male/female) - > 2 000 mg/kgbw.; pure CAS 68-04-2: LD50 - rat (male/female) - > 2 000 mg/kgbw.; pure CAS 7778-77-0: LD50 - rat (male/female) - > 2 000 mg/kg bw.
Inhalation	Pure CAS 56-81-5: LC50 Rat inhalation > 570 mg/cu m/1 hr

Chronic toxicity

Skin corrosion/irritation	No information available.
Serious eye damage/irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.

STOT-single exposure

Pure CAS 57-50-1: May cause mechanical irritation.;pure CAS 7447-40-7: The substance is irritating to the eyes and respiratory tract.

Ingestion of large amounts could cause effects on the cardiovascular system. This may result in cardiac dysrhythmia.;pure CAS 68-04-2:

The substance is irritating to the eyes and respiratory tract.;pure CAS 7778-77-0: The substance is irritating to the eyes, skin and respiratory tract.

STOT-repeated exposure

Pure CAS 57-50-1: The substance may have effects on the teeth. This may result in dental caries. Repeated or prolonged contact with skin may cause dermatitis.

Aspiration hazard

Pure CAS 25322-68-3: A nuisance-causing concentration of airborne particles can be reached quickly when dispersed.;pure CAS 7447-40-7: Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly when dispersed, especially if powdered.;pure CAS 56-81-5: Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly on spraying.;pure CAS 68-04-2: Evaporation at 20°C is negligible; a nuisance-causing concentration of airborne particles can, however, be reached quickly when dispersed.;pure CAS 7778-77-0: A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

Section 12: Ecological information

12.1 Toxicity

- **Toxicity to fish:** pure CAS 7647- 14-5: LC50 - Lepomis macrochirus - 5 840 mg/L - 96 h.;pure CAS 25322-68-3: LC50 – Poecilia reticulata - > 100 mg/L - 96 h.;pure CAS 7447-40-7: LC50 - Pimephales promelas - 880 mg/L - 96 h.;pure CAS 56-81-5: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - 54 000 mg/L - 96 h.;pure CAS 68-04-2: LC50 - Leuciscus idus melanotus -440 mg/L - 48 h.;pure CAS 7778-77-0: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - > 100 mg/L - 96 h. Remarks:Potassium.
- **Toxicity to daphnia and other aquatic invertebrates:** pure CAS 7647- 14-5: LC50 - Daphnia magna - 874 mg/L - 48. Remarks:Complete immobilisation and no response to gentle agitation.;pure CAS 25322-68-3: LC50 - Daphnia magna - 9 096.488 mg/L - 24 h.;pure CAS 7447-40-7: EC50 - see below - >= 440 - <= 880 mg/L - 48 h.;pure CAS 56-81-5: LC50 - Daphnia magna - 1 955 mg/L - 48 h.;pure CAS 68-04-2: LC50 - Daphnia magna - 1 535 mg/L - 24 h.;pure CAS 7778-77-0: EC50 - Daphnia magna - > 100 mg/L - 48 h. Remarks:Phosphate.

- **Toxicity to algae:** pure CAS 7647-14-5: EC50 - Nitzschia sp. - 2 430 mg/L - 120 h.; pure CAS 25322-68-3: EC50 – Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - 15.915 mg/L - 72 h.; pure CAS 7447-40-7: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 100 mg/L - 72 h.; pure CAS 56-81-5: EC3 – Scenedesmus quadricauda - > 10 000 mg/L - 8 d.; pure CAS 68-04-2: Toxicity Threshold - Scenedesmus quadricauda - 640 mg/L - 8 d.; pure CAS 7778-77-0: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 100 mg/L - 72 h.
- **Toxicity to microorganisms:** pure CAS 7647-14-5: NOEC - activated sludge - 5 000 - 8 000 mg/L. Remarks: Respiration rate.; pure CAS 25322-68-3: IGC50 - Tetrahymena pyriformis - 770.636 mg/L - 48 h.; pure CAS 7447-40-7: EC50 - activated sludge, domestic - > 1 000 mg/L - 3 h. Remarks: Respiration rate.; pure CAS 56-81-5: Toxicity Threshold - Pseudomonas putida - > 10 000 mg/L – 16 h.; pure CAS 68-04-2: TT - Pseudomonas putida - > 10 000 mg/L - 16 h.; pure CAS 7778-77-0: EC50 - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 3 h. Remarks: Respiration rate.

12.2 Persistence and degradability

AEROBIC: Glycerin, present at 100 mg/L, reached 63% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1). Biodegradation rate constants of 0.258/day and 0.200/day in respirometric test systems employing activated sludge have also been reported, corresponding to 68% and 78% degradation, respectively(2).

12.3 Bioaccumulative potential

An estimated BCF of 3 was calculated in fish for glycerin(SRC), using a log Kow of -1.76(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

12.4 Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc of glycerin can be estimated to be 1(SRC). According to a classification scheme(2), this estimated Koc value suggests that glycerin is expected to have very high mobility in soil.

Section 13: Disposal considerations

13.1 Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing.

Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

Section 14: Transport information

IMGD Not dangerous goods

IATA: Not dangerous goods

ADR: Not dangerous goods

Section 15: Regulatory information

Regulation (EC) No. 1272/2008:

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Section 16: Other information

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****End Of MSDS****