

# **SAFETYDATA SHEETS**

According to the UN GHS revision 9

Version: 1.0 Creation Date: Mar. 18, 2024 Revision Date: Mar. 18, 2024

|     |  |  |  |            | Rev       | ision Date: Mar. 18 |  |  |  |
|-----|--|--|--|------------|-----------|---------------------|--|--|--|
| 1.  | Identification   |  |  |            |           |                     |  |  |  |
| 1.1 | <b>GHS Product identifier</b>                          | entifier   |  |            |           |                     |  |  |  |
|     | Product name   | ELISAtest assay  |  |            |           |                     |  |  |  |
| 1.2 | Other means of identificat                             | ion  |  |            |           |                     |  |  |  |
|     | Product number   | -ELK10245  |  |            |           |                     |  |  |  |
|     | Other names  | -  |  |            |           |                     |  |  |  |
| 1.3 | Recommended use of the o                               | hemical and restrictio   | ns on use  |            |           |                     |  |  |  |
|     | Identified uses  | For research use only.   |  |            |           |                     |  |  |  |
|     | Uses advised against                                   | no data available  |  |            |           |                     |  |  |  |
| 1.4 | Supplier's details                                     |  |  |            |           |                     |  |  |  |
|     | Company ELK (Wuhan) BiotechnologyCO.,Ltd.              |  |  |            |           |                     |  |  |  |
|     | Address  |  | No.203 B.11 Wuhan Optics Valley Precision Medical Industry Base 2.1,No.9 Gaokeyuan 3rd<br>Road, East Lake High-Tech Development Zone, Wuhan,P.R.C<br>+86-27-59760950 |            |           |                     |  |  |  |
|     | Telephone  | +86-27-59760950  |  |            |           |                     |  |  |  |
| 1.5 | Emergency phone number                                 | Emergency phone number   |  |            |           |                     |  |  |  |
|     | Emergency phone number +86-18986165840                 |  |  |            |           |                     |  |  |  |
|     | Service hours  | Monday to Friday, 9 am-5 pm (Standard time zone: UTC/GMT+8 hours). |  |            |           |                     |  |  |  |
| 2.  | Hazard identification                                  |  |  |            |           |                     |  |  |  |
| .1  | Classification of the substa                           | nce or mixture   |  |            |           |                     |  |  |  |
|     | Not classified.  |  |  |            |           |                     |  |  |  |
| .2  | GHS label elements, including precautionary statements |  |  |            |           |                     |  |  |  |
|     | Hazard pictogram(s)                                    | No symbol.   |  |            |           |                     |  |  |  |
|     | Signal word  | No signal word   |  |            |           |                     |  |  |  |
|     | Hazard statement(s)<br>Precautionary statement(s)      | none   |  |            |           |                     |  |  |  |
|     | Prevention   | none   |  |            |           |                     |  |  |  |
|     | Response   | none   |  |            |           |                     |  |  |  |
|     | Storage  | none   |  |            |           |                     |  |  |  |
|     | Disposal   | none   |  |            |           |                     |  |  |  |
| .3  | Other hazards which do n                               | ot result in classificatio   | n  |            |           |                     |  |  |  |
|     | no data available                                      |  |  |            |           |                     |  |  |  |
| •   | Composition/informati                                  | on on ingredients  |  |            |           |                     |  |  |  |
| .1  | Substances   |  |  |            |           |                     |  |  |  |
|     | not applicable   |  |  |            |           |                     |  |  |  |
| .2  | Mixtures   |  |  |            |           |                     |  |  |  |
|     | (h., t.)   |  | Common names and   | CAS        | EC        | %                   |  |  |  |
|     | Chemical name  |  | synonyms   | number     | number    | [weight]            |  |  |  |
|     | Water  |  | Water<br>Sodium chloride   | 7732-18-5  | 231-791-2 | 78.39%              |  |  |  |
|     |  | Sodium chloride  |  | 7647-14-5  | 231-598-3 | 14.16%              |  |  |  |
|     | Sucros   |  | Sucrose  | 57-50-1    | 200-334-9 | 2.28%               |  |  |  |
|     | Poly(oxy-1,2-ethanediyl)α,-hydro-<br>ethoxyla          |  | Poly (ethylene glycol) - 4000  | 25322-68-3 | 500-038-2 | 1.33%               |  |  |  |
|     | Potassium sodi   | ım tartrate  | Potassiumsodium tartrate<br>tetrahydrate   | 6381-59-5  | 613-385-0 | 1.07%               |  |  |  |

| Chemical name   | Common names and                         | CAS        | EC        | %        |
|---|--|------------|-----------|----------|
| Chemical name   | synonyms                                 | number     | number    | [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 | 2.28%    |
| Poly(oxy-1,2-ethanediyl)α,-hydro-ω-hydroxy- Ethane-1,2-diol,<br>ethoxylated | Poly (ethylene glycol) - 4000            | 25322-68-3 | 500-038-2 | 1.33%    |
| Potassium sodium tartrate   | Potassiumsodium tartrate<br>tetrahydrate | 6381-59-5  | 613-385-0 | 1.07%    |
| Potassiumchloride   | Potassiumchloride                        | 7447-40-7  | 231-211-8 | 0.81%    |
| 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%    |
| Trisodiumcitrate  | 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 dihydrogenorthophosph e   | Potassium dihydrogen phosphate           | 7778-77-0  | 231-913-4 | 0.05%    |

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| 4.    | First-aid measures  |   |  |  |  |  |  |  |  |
|-------|---|---|--|--|--|--|--|--|--|
| 4.1   | Description of necessary fir  | st-aid measures   |  |  |  |  |  |  |  |
|       | Following inhalation  |   |  |  |  |  |  |  |  |
|       |   | Move the victim into fresh air. Ifbreathing is difficult, give oxygen. Ifnot breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical. |  |  |  |  |  |  |  |
|       | Following skin contact  |   |  |  |  |  |  |  |  |
|       |   | ediately. Wash off with soap and plenty of wate   | r.   |  |  |  |  |  |  |
|       | Following eye contact   |   |  |  |  |  |  |  |  |
|       | Rinse with pure water for at least 15 minutes.  |   |  |  |  |  |  |  |  |
|       | Following ingestion   | ice vomiting. Never give anything by mouth to   | an unconsciousnerson   |  |  |  |  |  |  |
| 4.2   | Most important symptoms/  |   | an unconsciousperson.  |  |  |  |  |  |  |
|       | no data available   | •   |  |  |  |  |  |  |  |
| 4.3   | Indication of immediate me<br>no data available   | dical attention and special treatm  | ent needed, if necessary   |  |  |  |  |  |  |
| 5.    | Fire-fighting measures  |   |  |  |  |  |  |  |  |
| 5.1   | Suitable extinguishing med  | ia  |  |  |  |  |  |  |  |
|       | Use dry chemical, carbon dioxide or   | alcohol-resistantfoam.  |  |  |  |  |  |  |  |
| 5.2   | Specific hazards arising fro  | om the chemical   |  |  |  |  |  |  |  |
|       | Hazardous combustion produ-   | ets   |  |  |  |  |  |  |  |
|       | no data available   |   |  |  |  |  |  |  |  |
| 5.3   | Special protective actions f<br>Wear self-contained breathing appar   | 8   |  |  |  |  |  |  |  |
| 6.    | Accidental release meas   | ures  |  |  |  |  |  |  |  |
| 6.1   | Personal precautions, prote   | ctive equipment and emergency p   | rocedures  |  |  |  |  |  |  |
| 011   | Ventilation. Collect leaking and spi<br>Then store and dispose of according                                     |   | ole. Absorb remaining liquid in sand or inert absorbent.   |  |  |  |  |  |  |
| 6.2   | Environmental precautions   |   |  |  |  |  |  |  |  |
|       | Prevent further spillage or leakage i avoided.  | fit is safe to do so. Do not let the chemical ente  | er drains. Discharge into the environment must be  |  |  |  |  |  |  |
| 6.3   |   | containment and cleaning up   |  |  |  |  |  |  |  |
|       |   |   | for disposal. Remove all sources of ignition. Use spark-<br>e promptly disposed of, in accordance with appropriate |  |  |  |  |  |  |
| 7.    | Handling and storage  |   |  |  |  |  |  |  |  |
| 7.1   | Precautions for safe handli   | ng  |  |  |  |  |  |  |  |
|       | Handling in a well ventilated place.<br>Prevent fire caused by electrostatic                                    | Avoid contact with skin and eyes. Avoid form discharge steam.   | ation ofdust and aerosols. Use non-sparking tools.   |  |  |  |  |  |  |
| 7.2   | Ũ   | , including any incompatibilities   |  |  |  |  |  |  |  |
|       | Store the container tightly closed in   | a dry, cool and well-ventilatedplace. Store apa   | rt from foodstuff containers or incompatiblematerials.   |  |  |  |  |  |  |
| 8.    | Exposure controls/perso   | onal protection   |  |  |  |  |  |  |  |
| 8.1   | Control parameters  |   |  |  |  |  |  |  |  |
|       | Occupational Exposure limit values  |   |  |  |  |  |  |  |  |
|       | pure CAS 56-81-5: MAK: (inhalable fraction): 200 mg/m3; peak limitation category: I(2); pregnancy risk group: C |   |  |  |  |  |  |  |  |
|       | Biological limit values   |   |  |  |  |  |  |  |  |
| • •   | no data available   |   |  |  |  |  |  |  |  |
| 8.2   | Appropriate engineering c   |   | d - free and the side  |  |  |  |  |  |  |
|       | elimination area.   | in accordance with good industrial hygiene a  | nd safety practice. Setup emergency exits and the risk-  |  |  |  |  |  |  |
| 8.3   | Individual protection meas  | ures, such as personal protective e   | quipment (PPE)   |  |  |  |  |  |  |
| ELISA | test assay  |   | Page 2 of 8  |  |  |  |  |  |  |
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| ogy      |   |  |  |  |  |  |  |
|----------|---|--|--|--|--|--|--|
|          | Eye/face protection   |  |  |  |  |  |  |
|          | Wear safety goggles.  |  |  |  |  |  |  |
|          | Skin protection   |  |  |  |  |  |  |
|          | Handle with gloves. Wash and dry hand   | S.   |  |  |  |  |  |
| 111110   | Respiratory protection  |  |  |  |  |  |  |
|          | 1 .1  | tion or other symptoms are experienced, use a full-face respirator.  |  |  |  |  |  |
|          | Thermal hazards   |  |  |  |  |  |  |
|          | no data available   |  |  |  |  |  |  |
|          | Physical and chemical pro   | nerties  |  |  |  |  |  |
|          |   | -  |  |  |  |  |  |
|          | Physicalstate<br>Colour   | Transparentliquid.<br>Colourless.  |  |  |  |  |  |
|          | Odour   | Weak odour.  |  |  |  |  |  |
|          | Melting point/freezing point<br>Boiling point or initial boiling point<br>and boiling range | pure CAS7732-18-5:0。 C;pure CAS7647-14-5:801 °C. Atm. press.:1 atm.;pure CAS57-50-1:<br>190-192。 C;pure CAS6381-59-5:70-80。 C;pure CAS7447-40-7:770-773°C;pure CAS 10039-<br>32-4:35。 C;pure CAS56-81-5: 18°C;pure CAS68-04-2: > 300°C;pure CAS778-77-0: 253°C<br>pure CAS7732-18-5: 100°C(it);pure CAS7647-14-5: 1465°C/1 atm(lit);pureCAS57-50-1:<br>697.1。 C at 760 mmHg;pure CAS6381-59-5:399.3。 C at 760 mmHg;pure CAS7447-40-7:  |  |  |  |  |  |
|          | and bonnig range  | 146°C;pure CAS 10039-32-4: 158°. C at 760 mmHg;pureCAS56-81-5:290°C;pure CAS7778-<br>77-0: > 449.85°C. Atm. press.:Pa.   |  |  |  |  |  |
|          | Flammability  | non flammable  |  |  |  |  |  |
|          | Lower and upper explosion<br>limit/flammability limit                                       | no data available  |  |  |  |  |  |
|          | Flashpoint  | no data available  |  |  |  |  |  |
|          | Auto-ignitiontemperature<br>Decompositiontemperature  | pure CAS 56-81-5: 393°C<br>no data available   |  |  |  |  |  |
|          | рН  |  |  |  |  |  |  |
|          | Kinematic viscosity   | pure CAS 7447-40-7: 7. Remarks:Temperature and concentration not reported;pure CAS 68-04-         2: 8.4. Remarks:Ambienttemperature;pureCAS7778-77-0: Between 4,2 and 4,8 (1% solution)         tic viscosity       pure CAS56-81-5: 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.       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 CAS6381-59-5: 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 CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS7778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-77-0: Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770-70; Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770; Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770; Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770; Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770; Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770; Solubility in water, g/100 ml at 25°C: 42.5 ;pure CAS778-778-770; Solubility in water, g/100 ml at 25°C; 42.5 ;pure CAS778-778-770; Sol |  |  |  |  |  |
|          | Partition coefficient n-octanol/water<br>Vapour pressure                                    | pure CAS57-50-1: -3.67;pure CAS56-81-5: -1.76;pure CAS 68-04-2: log Pow =  -1.72.<br>pure CAS 7732-18-5: 3 mmHg ( 37 °C);pure CAS 7647-14-5: 1 mmHg ( 865 °C);pure CAS   |  |  |  |  |  |
|          | Density and/or relative density   | 56-81-5: 0.01 Pa(25°C);pure CAS68-04-2: 0 Pa. Temperature:25 °C.<br>Remarks:Extrapolated,;pureCAS7778-77-0: 4.5 fPa. Temperature:25 °C.<br>pure CAS7732-18-5: 1.000g/mL at 3.98°C(lit.);pure CAS7647-14-5: 2.16. Temperature:25  |  |  |  |  |  |
|          |   | °C.;pure CAS57-50-1: 1.6 g/cm3;pure CAS6381-59-5: 1.79;pureCAS 7447-40-7: 1.98<br>g/cm3;pure CAS 10039-32-4: 1.52 g/cm3;pureCAS56-81-5: 1.26;pureCAS68-04-2: 1.857.<br>Temperature:20 °C.;pure CAS7778-77-0:2.34 g/cm3   |  |  |  |  |  |
|          | Relative vapour density<br>Particlecharacteristics  | pure CAS7732-18-5: <1 (vs air);pureCAS56-81-5: 3.1 (vs air)<br>not applicable  |  |  |  |  |  |
| 0.       | Stability and reactivity  |  |  |  |  |  |  |
| 0.1      | Reactivity No hazardous reactions if stored and har   | ndled as prescribed/indicated.   |  |  |  |  |  |
|          | Chemical stability  |  |  |  |  |  |  |
|          | Stable under recommendedstorage con   | ditions  |  |  |  |  |  |
|          | 5   |  |  |  |  |  |  |
|          | Possibility of hazardous react  |  |  |  |  |  |  |
|          | No hazardous reactions are known und  | er conditionsothormal use.   |  |  |  |  |  |
|          | Conditions to avoid Avoid high temperaturesand direct sunlight.                             |  |  |  |  |  |  |
|          | <b>Incompatible materials</b><br>no data available  |  |  |  |  |  |  |
|          | Hazardous decomposition pro   | oducts   |  |  |  |  |  |
|          |   | fstored and handled as prescribed/indicated.   |  |  |  |  |  |
|          | Toxicological information   |  |  |  |  |  |  |
|          | -   |  |  |  |  |  |  |
|          |   |  |  |  |  |  |  |
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# Acute toxicity

- ELK Biotechnology 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 CAS7778-77-0: LD50 Mouse oral 2820 mg/kgbw Inhalation: pure CAS 56-81-5: LC50 Rat inhalation > 570 mg/cu m/1 hr Dermal: 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.

### Skin corrosion/irritation

no data available

# Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

# Germ cell mutagenicity

no data available

## Carcinogenicity

no data available

## **Reproductive toxicity**

no data 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

The CAS 25322-68-3: A nuisance-causing concentration of airborne particles can be reached quickly when dispersed, pure CAS7447-40-7: 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, specially if powdered.

#### 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: Salmogairdneri) 54 000 mg/L 96 h.;pure CAS 68-04-2: LC50 Leuciscusidus melanotus 440 mg/L 48 h.;pure CAS 7778-77-0: LC50 Oncorhynchus mykiss (previous name: Salmo gairdneri) -> 100 mg/L 96 h.
- 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 1 955 mg/L 48 h.pure CAS 7778-77-0: EC50 Daphnia magna > 100 mg/L 48 h. Remarks: Phosphate.
- 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: Raphidocelissubcapitata, Selenastrumcapricornutum) 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 72 h. Toxicity to microorganisms: pure CAS 7647-14-5: NOEC activated sludge 5 000 8 000 mg/L 72 h. Toxicity to microorganisms: pure CAS 7647-14-5: NOEC activated sludge 5 000 8 000 mg/L 72 h. Toxicity to microorganisms: 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 ofa 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% offits theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITItest(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 of3 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

ELISAtest assay

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Other adverse effects no data available

# ELK Biotechnology Disposal considerations

#### 13.1 **Disposal methods**

# Product

The material can be disposed ofby 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.

| 14.  | Transport information   |                           |                            |  |
|------|---|---------------------------|----------------------------|--|
| 14.1 | UN number   |                           |                            |  |
|      | ADR/RID:Not dangerous goods.  | IMDG:Not dangerous goods. | IATA: Not dangerous goods. |  |
| 14.2 | UN proper shipping name   |                           |                            |  |
|      | ADR/RID:Not dangerous goods.<br>IMDG:Not dangerous goods.<br>IATA: Not dangerous goods. |                           |                            |  |
| 14.3 | Transport hazard class(es)  |                           |                            |  |
|      | ADR/RID:Not dangerous goods.  | IMDG:Not dangerous goods. | IATA: Not dangerous goods. |  |
| 14.4 | Packing group, if applicable  |                           |                            |  |
|      | ADR/RID:Not dangerous goods.  | IMDG:Not dangerous goods. | IATA: Not dangerous goods. |  |
| 14.5 | Environmental hazards   |                           |                            |  |
|      | ADR/RID:No  | IMDG:No                   | IATA: No                   |  |
| 14.6 | Special precautions for user  |                           |                            |  |

no data available

no data available

14.7 Transport in bulk according to IMO instruments

#### 15. **Regulatory information**

15.1 Safety, health and environmental regulations specific for the product in question

|  | · · ·   |            |             |  |  |  |
|--|---|------------|-------------|--|--|--|
| Chemical name  | Common names and synonyms                     | CAS number | EC number   |  |  |  |
| Water  | Water   | 7732-18-5  | 231-791-2   |  |  |  |
| European Inventory of Existing Commercial Chemical Substances (EINECS)   |   |            |             |  |  |  |
| EC Inventory   |   |            | Listed.     |  |  |  |
| United States Toxic Subs   | tances Control Act (TSCA)Inventory            |            | Listed.     |  |  |  |
| China Catalog of Hazardo   | ous chemicals 2015                            |            | Not Listed. |  |  |  |
| New Zealand Inventory o  | f Chemicals (NZIoC)                           |            | Listed.     |  |  |  |
| Philippines Inventory of (   | Chemicals and Chemical Substances (PICCS)     |            | Listed.     |  |  |  |
| Vietnam National Chemic  | al Inventory                                  |            | Listed.     |  |  |  |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |   |            |             |  |  |  |
| Korea Existing Chemicals   | s List (KECL)                                 |            | Listed.     |  |  |  |
| Chemical name  | Common names and synonyms                     | CAS number | EC number   |  |  |  |
| Sodium chloride  | Sodium chloride                               | 7647-14-5  | 231-598-3   |  |  |  |
| European Inventory of Ex   | sisting Commercial Chemical Substances (EINEC | CS)        | Listed.     |  |  |  |
| EC Inventory   |   |            |             |  |  |  |
| United States Toxic Subs   | tances Control Act (TSCA)Inventory            |            | Listed.     |  |  |  |
| China Catalog of Hazardous chemicals 2015                                |   |            |             |  |  |  |
| New Zealand Inventory of Chemicals (NZIoC)                               |   |            |             |  |  |  |
| Philippines Inventory of (   | Chemicals and Chemical Substances (PICCS)     |            | Listed.     |  |  |  |
| Vietnam National Chemic  | cal Inventory                                 |            | Listed.     |  |  |  |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |   |            |             |  |  |  |

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| Korea Existing Chemicals List (KECL)                                   |                           |            |           |  |  |
|--|---------------------------|------------|-----------|--|--|
| Chemical name  | Common names and synonyms | CAS number | EC number |  |  |
| Sucrose  | Sucrose                   | 57-50-1    | 200-334-9 |  |  |
| European Inventory of Existing Commercial Chemical Substances (EINECS) |                           |            |           |  |  |

| EC Inventory  |  |                                       |                             |             |              | Listed.     |
|---|--|---------------------------------------|-----------------------------|-------------|--------------|-------------|
| United States Toxic Substances Control Act (TSCA)Inventory  |  |                                       |                             |             | Listed.      |             |
| China Catalog of Hazardo  |  | , , , , , , , , , , , , , , , , , , , |                             |             |              | Not Listed. |
| New Zealand Inventory o   |  | 3                                     |                             |             |              | Listed.     |
| Philippines Inventory of C  |  | ,                                     | ces (PICCS)                 |             |              | Listed.     |
| Vietnam National Chemic   |  |                                       | ()                          |             |              | Listed.     |
| Chinese Chemical Invento  |  | nical Substan                         | ces (China IECSC)           |             |              | Listed.     |
| Korea Existing Chemicals  |  | incar Substan                         | tes (enna ileoc)            |             |              | Listed.     |
| Korea Existing Chemicals  | , List (IKECE)   |                                       | Common names and            |             | CAR          | Eisted.     |
|   | Chemical name         Common names and<br>synonyms         CAS<br>number           Poly(oxy-1,2-ethanediy)α,-hydro-ω-hydroxy- Ethane-1,2-diol,         Poly (othylara-glyac)         4000         25232.68.3 |                                       |                             |             | CAS<br>umber | EC number   |
| et  | hoxylated  |                                       | Poly (ethylene glycol) - 40 | 253         | 322-68-3     | 500-038-2   |
| European Inventory of Ex  | kisting Commercial   | Chemical Sul                          | bstances (EINECS)           |             |              | Not Listed. |
| EC Inventory  |  |                                       |                             |             |              | Listed.     |
| United States Toxic Subs  |  | TSCA)Invent                           | tory                        |             |              | Listed.     |
| China Catalog of Hazardo  |  |                                       |                             |             |              | Not Listed. |
| New Zealand Inventory of  |  | ·                                     |                             |             |              | Listed.     |
| Philippines Inventory of C  |  | nical Substanc                        | ces (PICCS)                 |             |              | Listed.     |
| Vietnam National Chemic   |  |                                       |                             |             |              | Listed.     |
| Chinese Chemical Invent   | ory of Existing Chen   | nical Substan                         | ces (China IECSC)           |             |              | Listed.     |
| Korea Existing Chemicals  | s List (KECL)  |                                       |                             |             |              | Listed.     |
| Chemical name   | Comr   | non names an                          | nd synonyms                 | CAS nu      | mber         | EC number   |
| Potassium sodium tartrate   | e Potassi  | um sodium tartra                      | ate tetrahydrate            | 6381-5      | 9-5          | 613-385-0   |
| European Inventory of Existing Commercial Chemical Substances (EINECS)  |  |                                       | Not Listed.                 |             |              |             |
| EC Inventory  |  |                                       |                             |             | Not Listed.  |             |
| United States Toxic Substances Control Act (TSCA)Inventory  |  |                                       | Not Listed.                 |             |              |             |
| China Catalog of Hazardous chemicals 2015   |  |                                       |                             | Not Listed. |              |             |
| New Zealand Inventory of Chemicals (NZIoC)  |  |                                       |                             |             |              | Listed.     |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS)  |  |                                       |                             |             | Listed.      |             |
| Vietnam National Chemical Inventory   |  |                                       |                             |             | Listed.      |             |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)  |  |                                       |                             |             | Listed.      |             |
| Korea Existing Chemicals  | • •  |                                       |                             |             |              | Not Listed. |
| Chemical name   | , <i>, , ,</i> , , , , , , , , , , , , , , ,   | names and sy                          | vnonvms                     | CAS num     | ber          | EC number   |
| Potassiumchloride   |  | otassiumchloride                      |                             | 7447-40     |              | 231-211-8   |
| European Inventory of Ex  |  |                                       |                             |             |              | Listed.     |
| EC Inventory  | Bounder etal   |                                       |                             |             |              | Listed.     |
| United States Toxic Subs  | tances Control Act (   | (TSCA)Invent                          | torv                        |             |              | Listed.     |
| China Catalog of Hazardo  |  |                                       | J                           |             |              | Not Listed. |
| New Zealand Inventory of  |  |                                       |                             |             |              | Listed.     |
| Philippines Inventory of C  |  | <i>`</i>                              | Pes (PICCS)                 |             |              | Listed.     |
| Vietnam National Chemic   |  | iitai Substalli                       |                             |             |              | Listed.     |
|   |  | nical Substan                         | cas (China IECSC)           |             |              |             |
| Chinese Chemical Invento  | •  | incai substant                        | ies (China IECSC)           |             |              | Listed.     |
| Korea Existing Chemicals  | · · · ·  | C.                                    |                             | CAS         |              | Listed.     |
| Chemical r  |  |                                       | names and synonyms          |             | umber        | EC number   |
| Phosphoric acid, sodium sa  | · · ·  |                                       | n hydrogen phosphate        | 1003        | 9-32-4       | 600-088-6   |
| European Inventory of Ex  | commercial   | Cnemical Sul                          | ostances (EINECS)           |             |              | Not Listed. |
| EC Inventory  |  | (TOO 1) -                             |                             |             |              | Not Listed. |
| United States Toxic Subs  |  | TSCA)Invent                           | tory                        |             |              | Not Listed. |
| China Catalog of Hazardo  |  |                                       |                             |             |              | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC)  |  |                                       |                             |             |              | Listed.     |
| Philippines Inventory of C  | Chemicals and Chen   | nical Substanc                        | ces (PICCS)                 |             |              | Listed.     |
| Vietnam National Chemical Inventory<br>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |  |                                       |                             |             |              | Listed.     |
|   |  |                                       |                             |             | Listed.      |             |
| chinese chemical invent   | ory of Existing Chen   | mean Substant                         | ( /                         |             |              |             |

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| Chemical name  | Chemical name Common names and synonyms |           | EC number |  |  |
|--|---|-----------|-----------|--|--|
| Glycerol   | Glycerol                                | 200-289-5 |           |  |  |
| European Inventory of Existing Commercial Chemical Substances (EINECS) |   |           |           |  |  |
| EC Inventory   |   |           |           |  |  |
| United States Toxic Substances Control Act (TSCA)Inventory             |   |           |           |  |  |
| China Catalog of Hazardous chemicals 2015                              |   |           |           |  |  |
| New Zealand Inventory of Chemicals (NZIoC)                             |   |           |           |  |  |

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| Philippines Inventory of Chemicals and Chemical Substances (PICCS)       |                  |                                 |            |             |
|--|------------------|---------------------------------|------------|-------------|
| Vietnam National Chemical Inventory                                      |                  |                                 |            |             |
| Chinese Chemical Inventory of Existing Chemical Substances (China IECSC) |                  |                                 |            |             |
| Korea Existing Chemicals List (KECL)                                     |                  |                                 |            |             |
| Chemical name  | Commo            | on names and synonyms           | CAS number | EC numbe    |
| Trisodiumcitrate   |                  | Sodium citrate                  | 68-04-2    | 200-675-3   |
| European Inventory of Existing Commercial Chemical Substances (EINECS)   |                  |                                 |            |             |
| EC Inventory   |                  |                                 |            |             |
| United States Toxic Substa   | nces Control Ac  | et (TSCA)Inventory              |            | Listed.     |
| China Catalog of Hazardou  | s chemicals 201  | 5                               |            | Not Listed. |
| New Zealand Inventory of (   | Chemicals (NZI   | oC)                             |            | Listed.     |
| Philippines Inventory of Ch  | emicals and Ch   | emical Substances (PICCS)       |            | Listed.     |
| Vietnam National Chemical  | Inventory        |                                 |            | Listed.     |
| Chinese Chemical Inventor  | y of Existing Ch | emical Substances (China IECSC) |            | Listed.     |
| Korea Existing Chemicals I   | List (KECL)      |                                 |            | Listed.     |
| Chemical nan   | ıe               | Common names and synonyms       | CASnumber  | EC numbe    |
| 2-Pyrrolidinone, 1-ethenyl-,   | homopolymer      | PVP40                           | 9003-39-8  | 618-363-4   |
| European Inventory of Existing Commercial Chemical Substances (EINECS)   |                  |                                 |            |             |
| EC Inventory   |                  |                                 |            |             |
| United States Toxic Substances Control Act (TSCA)Inventory               |                  |                                 |            |             |
| China Catalog of Hazardou  | s chemicals 201  | 5                               |            | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC)                               |                  |                                 |            |             |
| Philippines Inventory of Ch  | emicals and Ch   | emical Substances (PICCS)       |            | Listed.     |
| Vietnam National Chemical  | Inventory        |                                 |            | Listed.     |
| <b>Chinese Chemical Inventor</b>   | y of Existing Ch | emical Substances (China IECSC) |            | Listed.     |
| Korea Existing Chemicals I   | list (KECL)      |                                 |            | Listed.     |
| Chemical name  |                  | Common names and synonyms       | CASnumber  | EC numbe    |
| Potassium dihydrogenortho  | phosphae         | Potassium dihydrogen phosphate  | 7778-77-0  | 231-913-4   |
| European Inventory of Exis   | ting Commercia   | al Chemical Substances (EINECS) |            | Listed.     |
| EC Inventory   |                  |                                 |            | Listed.     |
| United States Toxic Substances Control Act (TSCA)Inventory               |                  |                                 |            | Listed.     |
| China Catalog of Hazardous chemicals 2015                                |                  |                                 |            | Not Listed. |
| New Zealand Inventory of Chemicals (NZIoC)                               |                  |                                 |            | Listed.     |
| Philippines Inventory of Chemicals and Chemical Substances (PICCS)       |                  |                                 |            | Listed.     |
| Vietnam National Chemical Inventory                                      |                  |                                 | Listed.    |             |
| Chinese Chemical Inventor  | y of Existing Ch | emical Substances (China IECSC) |            | Listed.     |
| Korea Existing Chemicals I   | ist (KECL)       |                                 |            | Listed.     |

#### 16. Other information

Information on revision

| Creation Date        | Mar. 18, 2024 |
|----------------------|---------------|
| <b>Revision Date</b> | Mar. 18, 2024 |

Abbreviations and acronyms

- CAS:Chemical Abstracts Service
- CAS:Chemical Abstracts Service
   ADR: European Agreement concerning the International Carriage ofDangerous Goods by Road
   RID: Regulation concerning the International Carriage ofDangerous Goods by Rail
   IMD6:InternationalMaritime Dangerous Goods
   IATA: International Air Transportation Association
   TWA: Time Weighted Average
   STEL: Short term exposure limit
   LC50: Lethal Concentration 50%
   LD50: Lethal Dose 50%
   EC50: Effective Concentration50%

- EC50:Effective Concentration50%

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# References

- IPCS The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home
  HSDB Hazardous Substances Data Bank, website: https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm
  IARC International Agency for Research on Cancer, website: http://www.iarc.fr/
  eChemPortal The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request local=-n
  cAMEOChemicals, website: http://cameochemicals.noaa.gov/search/simple
  ChemIDplus, website: http://cameochemicals.noaa.gov/search/simple
  ERG Emergency Response Guidebook byU.S. Department ofTransportation, website: http://www.phmsa.dot.gov/hazmat/library/erg
  Germany GESTIS-database on hazard substance, website: http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp
  ECHA European Chemicals Agency, website: https://echa.europa.eu/



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