

## **1. Identification of the substance/mixture and of the company/undertaking**

### **1.1 Identification of the substance/preparation**

**Product name** : Champion™ *E. coli* Transformation Kit

**Product code** : CK1000

**Recommended use** : For laboratory research use.

### **1.2 Company/Undertaking identification**

SMOBIO Technology, Inc.

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### **1.3 Emergency telephone number**

**Emergency telephone** : +886 3 5799292 (09.00-18.00 TST)

## **2. Hazards identification**

### **2.1 Classification of the substance or mixture**

**GHS/GLP** : Classification to Regulation (EC) No 1272/2008

**DSD/DPD** : Classification to according to EU Directives 67/548/EC or 1999/45/EC

### **2.2 Label elements**

**Symbol(s)** : Void

**Signal Word** : Not dangerous

### **2.3 Other information**

**Hazards deriving from physical-chemical properties** : The data available do not support any physical or chemical hazard. **Except for Dithiothreitol.**

**Human health hazards** : Inappropriate handling may cause formation of aerosols.

Inhalation of aerosols may cause allergic type reactions in sensitized individuals.

Prolonged skin contact may cause minor irritation.

**Dithiothreitol** can be absorbed through skin; concentrated dithiothreitol may cause eye injuries, skin, respiratory and nervous system damages.

**Caution:** Avoid inhalation, ingestion, and skin contacts.

**Environmental hazards** : The data available do not support any environmental hazard.

**3. Composition/information on ingredient**

**3.1 Ingredients**

**3.1.1 Champion™ CC Buffer**

<u>Chemical name</u>	<u>Concentration</u>	<u>EC No.</u>	<u>CAS No.</u>	<u>Classification</u>
DMSO	5 -10%	200-664-3	67-68-5	Skin Irrit. 2; H315, Eye Irrit. 2; H319
Trade secret	5 -10%	Proprietary	Proprietary	Acute Tox. 4; STOT RE 2; H302, H373; Xn, R22
Trade secret	1 -5%	Proprietary	Proprietary	Not classified

**3.2 Other components**

Components not listed here are not dangerous or their concentrations do not exceed the limits specified in the EU directive 1999/45/EC.

**3.3 Additional information**

For the wording of the listed risk phrases refer to section 16.

**4. First aid measures**

**4.1 General information**

No special measures required.

**4.2 Description of first aid measures**

**In case of ingestion :** If swallowed, rinse mouth and throat thoroughly with water.

Consult a doctor in event of any complaints.

**In case of inhalation :** If inhaled, remove victim from area of exposure. If symptoms of irritation or respiratory allergy occur, consult a doctor.

**In case of skin contact :** Generally, the product does not irritate the skin. If symptoms of irritation after prolonged exposure occur, consult a doctor.

**In case of eye contact :** Wash out opened eyes with plenty of water for several minutes. Consult a doctor in event of any complaints.

**5. Fire fighting measures**

**5.1 Suitable extinguishing agents**

Water spray, Carbon dioxide (CO<sub>2</sub>), dry chemical powder or appropriate foam.

**5.2 Not suitable extinguishing agents**

None.

**5.3 Special exposure hazards from decomposition products**

Not thoroughly investigated.

**5.4 Protective equipment**

Wear self-contained breathing apparatus and protective clothing.

**6. Accidental release measures**

**6.1 Personal precautions**

Wear appropriate gloves (see Section 8), safety glasses to clean small releases/spillage. In case of vapor/aerosol formation, wear suitable respiratory protection means. Ventilate the area.

**6.2 Environmental precautions**

No special measures required.

**6.3 Methods for cleaning up**

Absorb spillages with liquid-binding material. Ventilate and wash the area after the spillage is completely removed.

**6.4 Additional information**

No dangerous substances are released.

**7. Handling and storage**

**7.1 Handling**

No further requirements. Use appropriate personal protection measures (see Section 8). Avoid any contact with the liquid. Avoid the formation of aerosols. Ventilate area.

**7.2 Storage**

Store at - 20°C. No other specific requirements relating to the preparation.

**8. Exposure controls/personal protection**

**8.1 Control parameters**

<u>Chemical name</u>	<u>CAS No.</u>	<u>Exposure limits</u>
DMSO	67-68-5	No data available

**8.2 Exposure controls**

**Engineering measures** : Ensure adequate ventilation, especially in confined areas.

**8.3 Personal protection**

**Respiratory protection** : No special measures required.

**Hand protection** : Wear rubber gloves. No special requirements to rubber.

**Eye protection** : Safety glasses (goggles) are recommended during ordinary operations with the preparation.

**Skin protection** : The usual precautionary measures accepted in research laboratories, e.g. protective clothes (gowns). No specific requirements.

## **9. Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

#### **9.1.1 Champion™ CC Buffer**

**Appearance:** Liquid.

**Color:** Colourless

**Odor:** Odorless or weak.

**pH-value at 25°C:** ~8.7.

**Boiling point:** ~100°C.

**Flash Point:** Not applicable.

**Flammability / autoflammability:** The preparation is not flammable/self-igniting.

**Explosive properties:** The preparation does not possess explosive properties.

**Oxidizing properties:** Not applicable.

**Vapor pressure:** Not applicable.

**Relative density at 20°C:** ~1.06 g/cm<sup>3</sup>.

**Solubility in/miscibility with water:** Fully miscible.

**Fat solubility:** Not applicable.

**Vapor density:** Not applicable.

**Evaporation rate:** Not applicable.

**Conductivity:** Not applicable.

**Viscosity:** Slightly viscous.

#### **9.1.2 SMO-Broth**

**Appearance:** Liquid.

**Color:** Light yellow

**Odor:** Odorless or weak.

**pH-value at 25°C:** ~8.7.

**Boiling point:** ~100°C.

**Flash Point:** Not applicable.

**Flammability / autoflammability:** The preparation is not flammable/self-igniting.

**Explosive properties:** The preparation does not possess explosive properties.

**Oxidizing properties:** Not applicable.

**Vapor pressure:** Not applicable.

**Relative density at 20°C:** ~1.06 g/cm<sup>3</sup>.

**Solubility in/miscibility with water:** Fully miscible.

**Fat solubility:** Not applicable.

**Vapor density:** Not applicable.

**Evaporation rate:** Not applicable.

**Conductivity:** Not applicable.

**Viscosity:** Slightly viscous.

**9.2 Other information**

No further relevant information available.

**10. Stability and reactivity**

**10.1 Stability**

Stable under storage conditions (see section 7).

**10.2 Reactivity**

No information available.

**10.3 Possibility of hazardous reactions**

No dangerous reactions known.

**10.4 Conditions to avoid**

No conditions which may cause dangerous reactions.

**10.5 Incompatible materials**

No in particular.

**10.6 Hazardous decomposition products**

No dangerous decomposition products known.

**11. Toxicological information**

**11.1 Information on toxicology effects**

**Acute toxicity:**

**Inhalation:** Aerosols may cause allergic type reactions in sensitized individuals.

**Ingestion:** Repeated ingestion or excessive dosage may cause irritation of the gastrointestinal tract.

**Skin and eye contact:** Generally, the product does not irritate the skin and eyes.

Prolonged skin or eye contact may cause minor irritation.

<u>Chemical name</u>	<u>LD50 Oral</u>	<u>LD50 Dermal</u>	<u>LD50 Inhalation</u>
DMSO	14500 mg/kg(Rat)	40000 mg/kg(Rabbit)	40250 ppm-4 h(Rat)

Trade secret >4500 mg/kg(Rat) >10000 mg/kg(Rabbit)

Trade secret >50000 mg/kg(Rat) >20000 mg/kg(Rabbit)

**Chronic toxicity :**

Product does not present a chronic toxicity hazard based on known or supplied information

**12. Ecological information**

**12.1 Ecotoxicity**

Chemical name                      Ecotoxicity in water (LC50)

DMSO                                      Not available.

Trade secret                              >32500 mg/l 72 hours (Goldfish)

Trade secret                              >5000 mg/l 24 hours (Goldfish)

**12.2 Persistence and degradability**

The preparation is readily biodegradable.

**12.3 Bioaccumulative potential**

It is considered that the preparation does not accumulate in biota, and does not pass through the food chain.

**12.4 Other adverse effects**

Not applicable.

**13. Disposal consideration**

**13.1 Waste treatment methods**

**Waste from residues / unused products:** Dispose of in accordance with local regulation.

**Contaminated packaging:** Empty containers should be taken to an approved waste handling site for recycling or disposal.

**14. Transport information**

**IMDG/IMO:** Non-hazardous for sea freight.

**RID:** Non-hazardous for rail transport.

**ARD:** Non-hazardous for road transport.

**ICAO/IATA:** Non-hazardous for air transport.

**Other information:** The preparation may be stored in ice during the transportation.

## 15. Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No information available.

### 15.2 Chemical safety assessment

No information available.

### 15.3 Regulatory information

US :

**Labelling according to US Regulations:** Caution: Avoid contact and inhalation.

**US Regulatory information:** SARA LISTED: No.

EU :

**Labelling according to EU Guidelines:** The preparation is not dangerous within the meaning of Directives 67/548/EC, 1999/45/EC, and is not labelled with danger symbols or indications of danger.

**Canada :**

**WHMIS classification:** This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** No.

**NDSL:** No.

## 16. Other information

### 16.1 Full text of R-phrases referred to under sections 3

R20 : Harmful by inhalation.

R22 : Harmful if swallowed.

R36-38 : Irritating to eyes, respiratory system and skin.

R41 : Risk of serious damage to eyes.

### 16.2 Full text of physical and health hazards referred to under sections 3

H302 : Harmful if swallowed.

H303 : May be harmful if swallowed.

H315 : Causes skin irritation.

H319 : Causes serious eye irritation.

H318 : Causes serious eye damage.

H335 : May cause respiratory irritation.

H373 : May cause damage to organs through prolonged or repeated exposure if swallowed.

STOT RE : Specific target organ toxicity - repeated exposure



## SAFETY DATA SHEET

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The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SMOBIO shall not be held liable for any damage resulting from handling or from contact with the above product.