

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: TransformAid™ Bacterial Transformation Kit
Catalog Numbers: #K2710, #K2711
Company Name & Address: Fermentas UAB
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Description

Enzymes/nucleic acids in buffer solution; water solutions of components listed in table.
Volume of each product package varies: 1.25-35ml.

Components in Water		
Reagent	CAS#	Concentration, %
Calcium chloride	10035-04-8	0.35
Dimethyl sulfoxide	67-68-5	20
Dithiothreitol (DTT)	3483-12-3	4.63
HEPES	7365-45-9	0.24
Magnesium chloride	7791-18-6	≤ 0.48
Magnesium sulfate	10034-99-	0.25
Manganese chloride	13446-34-9	1.0
Peptone	73049-73-7	2.0
Polyethylene glycol 4000 (PEG)	25322-68-3	25
Potassium chloride	7447-40-7	≤ 2.6
Sodium chloride	7647-14-5	0.06
Yeast extract	8013-01-2	0.5

3. HAZARDS IDENTIFICATION

Primary routes of entry

Skin or eye contact from splashes.

Inhalation of the vapor at room temperature is unlikely.

Ingestion

Polyethylene glycol, dithiothreitol: Harmful if swallowed.

Dimethyl sulfoxide causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. May cause abdominal pain, drowsiness, chills and chest pains.

Skin contact

Irritating.

Dimethyl sulfoxide causes irritation to skin. Symptoms include redness, itching, and pain. May be absorbed through the skin; symptoms parallel to ingestion.

Eye contact

Irritating.

Evidence for reproductive toxicity, carcinogenicity and mutagenicity

Dimethyl sulfoxide is investigated as a tumorigen, mutagen and reproductive effector.

Dithiothreitol is investigated as a mutagen.

4. FIRST AID MEASURES

After skin contact

Wash skin with water and soap and rinse thoroughly. Remove contaminated clothing. Get medical attention if irritating occurs.

After eye contact

Rinse opened eyes for several minutes under running water. Get medical attention if eyes become irritating.

After swallowing (ingestion)

Rinse mouth. Drink plenty of water. Get medical attention if irritating or symptoms occur.

5. FIRE FIGHTING MEASURES

Fire and explosion hazards

Gives off irritating or toxic fumes in a fire.

Suitable extinguishing media

Water spray, carbon dioxide, extinguishing powder or foam.

Protective equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Not required.

Environmental precautions

Do not allow entering sewers, surfaces or ground water.

Measures for cleaning / collecting

Collect spilled liquid with liquid-binding material or inert absorbent and place it in container for disposal.

Wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling

No special measures necessary. Good laboratory technique should be used when handling.

Storage

No special measures necessary. Store at -20°C .

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Eye protection

Safety goggles (glasses) when risk of splashes.

Skin protection

Protective gloves, a lab coat.

Hygiene measures

Keep away from foodstuffs and beverages.

Avoid contact with the eyes and skin.

Do not eat, drink or smoke while working with products.

Breathing equipment

Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Liquid.

Color

Colorless.

Odor

Odorless.

Boiling point

No data available.

Flash point

No data available.

Explosive properties

No data available.

Vapor pressure

No data available.

pH

7- 7.8.

10. STABILITY AND REACTIVITY

Stability

Stable, under normal handling and storage conditions.

Decomposition

No data available.

Conditions to avoid

Contact with strong oxidants, fire.

11. TOXICOLOGICAL INFORMATION

Eye contact

Irritating to eyes.

Skin contact

Irritating to skin.

Dimethyl sulfoxide causes irritation to skin. Symptoms include redness, itching, and pain. May be absorbed through the skin; symptoms parallel to ingestion.

Ingestion

Polyethylene glycol, dithiothreitol: Harmful if swallowed.

Dithiothreitol: oral, rat: LD50 = 400mg/kg. *Polyethylene glycol*: oral, rat: LD50 = 500mg/kg.

Dimethyl sulfoxide causes irritation to the gastrointestinal tract. *Dimethyl sulfoxide*: oral, rat: LD50 = 14500mg/kg

Preparations may cause allergic reactions in certain sensitive individuals.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Burn the material in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal state and local environmental regulations.

14. TRANSPORT INFORMATION

Not regulated.

15. REGULATORY INFORMATION

R36

Irritating to eyes.

R38

Irritating to skin.

R22

Harmful if swallowed.

S36/37/39

Wear suitable protective clothing, gloves and eye/face protection.

16. OTHER INFORMATION

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features. Fermentas is not held liable for any damage resulting from handling or from contact with the above products.

MSDS has been prepared in accordance with EU Directive 67/548/EEC, 91/155/EEC and other EU Community legislations in force.

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