



Innovation Centre, Norwich Research Park, Colney, Norwich, UK. NR4 7GJ.
Tel: +44 (0) 1603 673591

MATERIAL SAFETY DATA SHEET

Section 1. Identification of Substance / Preparation:

Topoisomerase IV (*E. coli*) Enzyme/Protein and kDNA in buffer solution and buffers/solutions for use with Topoisomerase IV (*E. coli*) Decatenation Kits.

Catalogue Numbers: D4001, D4002, D4003 and D4004

Section 2: Composition / Information on Ingredients:

Each product package contains an aqueous solution and the volume contained therein varies from 0.02-1ml.

- 1) Topoisomerase IV Enzyme (*E. coli*)**, Catalogue Numbers T4001, T4002, T4003 and T4004

Active Ingredient: Topoisomerase IV (*E. coli*) Enzyme, CAS: None (EC. 5. 99.1.3)

0.95% (w/v) HEPES.KOH (mix of N-[2-Hydroxyethyl]piperazine-N'-[2-ethanesulfonic acid] and potassium hydroxide) (pH7.6), CAS: 82207-62-3

2% (w/v) Potassium glutamate, CAS: 6382-01-0

0.015% (w/v) DTT (Dithiothreitol), CAS: 3483-12-3

0.03% (w/v) EDTA (Ethylene diamine tetraacetic acid, tetrasodium salt), CAS: 6381-92-6

40% (w/v) Glycerol, CAS: 56.81.5

- 2) Dilution Buffer** Catalogue Number TD002

0.95% (w/v) HEPES.KOH (pH7.6), CAS: 82207-62-3

2% (w/v) Potassium glutamate, CAS: 6382-01-0

0.015% (w/v) DTT, CAS: 3483-12-3

0.03% (w/v) EDTA, CAS: 6381-92-6

40% (w/v) Glycerol, CAS: 56.81.5

- 3) Assay Buffer (Supplied X5)** Catalogue Numbers TD003

4.75% HEPES-KOH (pH 7.6), CAS 82207=62-3

0.15% DTT, CAS: 3483-12-3

10.0% Potassium Glutamate, CAS: 6382-01-0

1.07% Magnesium Acetate, CAS: 16674-78-5

0.25% ATP (Adenosine 5'-triphosphate disodium salt), CAS: 987-65-5

0.025% Albumin, CAS: 9048-46-8

- 4) kDNA** (Catalogue numbers K2001 and K2002)

Active Ingredient: DNA EC Number: 297-227-2 CAS #:93384-17-9

0.12% (w/v) Tris-HCl (mix of Tris(hydroxymethyl)aminomethane / hydrochloric acid) (pH 8.0), CAS 77-86-1

0.03% (w/v) EDTA, CAS 6381-92-6

□ **5) GSTEB (Supplied at 10X)**

6% (w/v) Tris-HCl, (pH 7.5) CAS: 77-86-1
3% (w/v) EDTA, CAS: 6381-92-6
50% (w/v) Glycerol, CAS: 56-81-5
0.1%(w/v) Bromophenol Blue CAS 115-39-9

Section 3: Hazards Identification:

Ingredients are either not classified as dangerous according to EC Directives, or not considered to be hazardous in the very low quantities/concentrations present.

Section 4: First Aid Measures:

In case of contact with skin, wash immediately with soap and water.
In case of contact with eyes, flush with water and seek medical advice if discomfort persists.

Section 5: Fire Fighting Measures:

Extinguishing media: water spray, carbon dioxide, dry chemical powder or foam as required.

Section 6: Accidental Release Measures:

Wear appropriate protective clothing. Absorb onto sand or vermiculite and place in closed container for disposal.

Section 7: Handling and Storage:

No special precautions necessary.

Section 8: Exposure Controls / Personal Protection:

Wear gloves and appropriate protective clothing to avoid contact with skin and eyes.

Section 9: Physical and Chemical Properties:

Aqueous, colourless liquid.

Section 10: Stability and Reactivity:

Stable.
Glycerol incompatible with oxidizing agents, halogens, ethylene oxide, nitric acid/sulphuric acid.
The possibility of reaction with other substances cannot be excluded.

Section 11: Toxicological Information:

Some constituents may cause skin irritation and eye irritation.

Section 12: Ecological Information:

No environmental hazard is anticipated provided that the material is handled and disposed of with due care and attention.

Section 13: Disposal Considerations:

Dispose of in accordance with local rules and regulations.

Section 14: Transport Information:

Not subject to transport regulations.

Section 15: Regulatory Information:

Ingredients are either not classified as dangerous according to EC Directives, or not considered to be hazardous in the very low quantities/concentrations present.
Caution – products for research use only, substances not fully tested.

Section 16: Other Information:

The above information is believed to be correct but does not purport to be all-inclusive and shall only be used as a guide. Inspiralis Ltd. and its governors, officers, employees and agents shall

not be held liable for any claims brought by third parties due to damage resulting from handling or from contact with the above product.

Version 24.1

Revision Date: 01.03.2025