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## **MATERIAL SAFETY DATA SHEET**

### Section 1. Identification of Substance / Preparation:

Topo IV (*E coli*) Enzyme/Protein and Linear pBR322 DNA (for DNA dependent ATPase kits only) in buffer solution and buffers/solution for use with Topo IV (*E coli*) ATPase kits.

Catalogue Number:ATPT001

### 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, T4004

Active Ingredient: Topoisomerase IV (*E.coli*) Enzyme, CAS: None (EC. 5. 99. 1. 3)

40% (W/v) Glycerol, CAS: 56-81-5

0.95% (w/v) HEPES.KOH (pH 7.6) CAS: 82207-62-3

2% (w/v) Potassium Glutamate, CAS: 6382-01-1

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

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

- **2) Dilution Buffer** (Catalogue Number TD002)

40% (v/v) Glycerol, CAS: 56-81-5

0.95% (w/v)HEPES.KOH (pH 7.6), CAS 82207-62-3

2% (w/v) Potassium Glutamate, CAS: 6382-01-1

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

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

- **3) Assay Buffer (Supplied X5)**

- (Catalogue Number SAB001)

4.16% (w/v) HEPES.KOH (pH7.6), CAS: 82207-62-

3-31.0% (w/v) Magnesium acetate, CAS: 16674-

78-5 0.07% (w/v) DTT, CAS:3483-12-3

10% (w/v) Potassium glutamate, CAS:6382-01-

00.025% (w/v) Albumin, CAS:9048-46-8

- **4) PK/LDH Enzymes**

Active ingredients:

0.16% (w/v) Pyruvate kinase CAS: 9001-59-6

0.11% (w/v) Lactate dehydrogenase CAS: 9001-60-9

0.24% (w/v) 4-(2-Hydroxyethyl)piperazin-1-ylethanesulphonic acid CAS: 7365-45-9

0.75% (w/v) Potassium Chloride CAS: 7447-40-7

0.003% (w/v) Edetic acid CAS: 60-00-4

50% (w/v) Glycerol CAS: 56-81-5

□ **5) NADH**

Dihyronicotinamide-adenine dinucleotide, disodium salt CAS: 606-68-8 ECS: 210-123-3

□ **6) PEP**

Phospho (enol) pyruvic acid monosodium salt CAS: 53823-68-0 ECS: 258-810-7

□ **7) pBR322 DNA (*E. coli*)**, Catalogue Numbers L0150, L0300, L0600 and L1000

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

Other ingredients in water: (volume of each product package varies from 0.01-1ml)

0.01% (w/v) Tris-HCL (mix of Tris (hydroxymethyl) aminomethane / hydrochloric acid), CAS 77-86-1

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

**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 23.1

Revision Date: 03.05.2024