1 Identification of the substance/mixture and of the company

1.1 Trade Name (As Labeled): **Substrate Solution**

1.2 Product Use: **Used for E. coli | 360 HCP ELISA. For in-vitro use only.**

1.3 Manufacturer's Name: **BioGenes GmbH**

Address: Köpenicker Str. 325, 12555 Berlin, Germany

Business Phone: +49 30 6576 2378 (Product information)

E-Mail (competent person): service@biogenes.de

1.4 Emergency telephone number: +49 30 19 24 0

2 HAZARD IDENTIFICATIONS

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No. 1272/2008 [CLP]

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [CLP].

2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 [CLP]

According to EC directives or the corresponding national regulations the product does not have to be labelled.

2.3 Other hazards

No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.

3 COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Substance

This substance is a mixture.

3.2 Mixture

Ready-to-use TMB ONE Substrate Solution.

HAZARDOUS INGREDIENTS:	CAS No./ EC No./ Registration No.	Amount	Hazard Classification, Hazard Statements
TMB 3,3´,5,5´-Tetramethylbenzidine	548227-17-7/ 259-364-6/ Not applicable	<0.02%	Acute Tox. 4, H302; Aquatic Chronic 2, H411; The concentration is low and does not affect the classification of the mixture.

4 FIRST-AID MEASURES

4.1 Description of first aid measures

General information:
Remove contaminated, saturated clothing immediately. In the case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Following inhalation:
Remove casualty to fresh air and keep at rest.

Following skin contact:
Wash immediately with soap and water. In case of skin irritation consult a physician.

Following eye contact:
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Following ingestion:
If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

Self-protection of the first aider:
First aider: Pay attention to self-protection!

4.2 Most important symptoms and effects, both acute and delayed symptoms and effects:

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Carbon dioxide (CO2), foam, water, extinguishing powder.

5.2 Special hazards arising from the substance or mixture Hazardous combustion products:

None.

5.3 Advice for fire-fighters

Co-ordinate fire-fighting measures to the fire surroundings.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Use personal protective equipment, see Section 8. For emergency responders: Use personal protective equipment, see Section 8.

6.2 Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

Clear contaminated areas thoroughly.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures:
Use in well-ventilated areas. Handle and open container with care. Always close containers tightly after the removal of product. Wear personal protective clothing (see Section 8).

Measures to prevent fire:
This product is not flammable. No special fire protection measures are necessary.

Advice on general occupational hygiene:
Avoid contact with skin, eyes and clothes. Provide eye shower and label its location conspicuously. Wash hands before breaks and after work. When using do not eat, drink, smoke, sniff. Remove contaminated, saturated clothing immediately. Wash contaminated clothing prior to re-use.

7.2 Conditions for safe storage, including any incompatibilities

No special measures are necessary.

8 EXPOSURE CONTROLS – PERSONAL PROTECTION

8.1 Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Exposure controls

Personal Protection General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Change contaminated clothing. Eye/face protection: Safety glasses Skin protection: Full contact: Glove material: Nitrile rubber Glove thickness: 0.11 mm Break through time: > 480 min Splash contact: Glove material: Nitrile rubber Glove thickness: 0.11 mm Break through time: > 480 min The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374. This recommendation applies only to the product stated in this safety data sheet and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

9 PHYSICAL and CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

(a) Appearance: Colourless to light yellow (at 20°C and 101.3 kPa)
(b) Odour: Odourless
(c) Odour threshold: Does not apply, as substance is odourless
(d) pH: 7-8
(e) Melting point / freezing point: No data available
(f) Initial boiling point and boiling range: No data available
(g) Flash point: No data available
(h) Evaporation rate: No data available
(i) Flammability (solid, gas): Does not apply
(j) Upper/lower flammability or explosive limits: Does not apply, mixture is not flammable
(k) Vapour pressure: No data available
(l) Vapour density: No data available
(m) Relative density: No data available
(n) Solubility(ies): Does not apply
(o) Partition coefficient: n-octanol/water: No data available

(p) Auto-ignition temperature: No data available
(q) Decomposition temperature: No data available
(r) Viscosity: No data available
(s) Explosive properties: Does not apply, mixture is not explosive
(t) Oxidising properties: None

9.2 Other information

No additional information relevant to safe use of the mixture.

10 STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

No data available.

10.6 Hazardous decomposition products

Does not decompose when used for intended uses.

11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity: Mixture
No data available

Acute toxicity: Ingredients
Reaction mass of 3,3´,5,5´-Tetramethylbenzidine
Oral LD50 316mg/kg (rat)

Skin corrosion/irritation: Mixture
No data available

Skin corrosion/irritation: Ingredients
Reaction mass of 3,3´,5,5´-Tetramethylbenzidine

Serious eye damage/irritation: Mixture
Moderate irritation

Serious eye damage/irritation: Ingredients
Reaction mass of 3,3´,5,5´-Tetramethylbenzidine

Respiratory or skin sensitisation: Mixture
No data available

Respiratory or skin sensitisation: Ingredients
No data available

Germ cell mutagenicity:
There are no data available for the ingredients.

Carcinogenicity:
There are no data available for the ingredients.

Reproductive toxicity:
There are no data available for the ingredients.

Specific target organ toxicity (single exposure):
There are no data available for the ingredients.

Specific target organ toxicity (repeated exposure):
There are no data available for the ingredients.

Aspiration hazard:
There are no data available for the ingredients.

12 ECOLOGICAL INFORMATION

12.1 Toxicity

No information available.

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No ingredients are PBT/vPvB, according to the criteria in REACH Annex XIII.

12.6 Other adverse effects

There are no data available for the ingredients.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Product / Packaging disposal: Handle uncleaned containers like the product itself.

14 TRANSPORTATION INFORMATION

14.1 UN number (ADR, RID, ADN, IMDG, IATA)

Not applicable.

14.2 UN proper shipping name (ADR, RID, ADN, IMDG, IATA)

Not applicable.

14.3 Transport hazard class(es) (ADR, RID, ADN, IMDG, IATA)

Not applicable.

14.4 Packing group (ADR, RID, ADN, IMDG, IATA)

Not applicable.

14.5 Environmental hazards

None.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

15 REGULATORY INFORMATION

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

Authorisations and/or restrictions on use:

None water Hazard Class 1, (Self-classification carried out according to VwVwS, 4. German Regulation).

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment has not been carried out.

16 OTHER INFORMATION

All chemicals may pose unknown hazards and should be used with cautions. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide for experienced personnel. BioGenes GmbH assumes no responsibility for the completeness or accuracy of the information contained herein. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers and protection of the environment.

Abbreviations and acronyms:

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS No: Chemical Abstracts Service number
CLP: Classification Labelling and Packaging Regulation
EC: European Commission
EC No: European Chemical number: EINECS, ELINCS or NLP
EEC: European Economic Community
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
EU: European Union
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IMDG: International Maritime Dangerous Goods
LD50: Lethal dose, 50%
MARPOL: Marine Pollution
NLP: No-longer Polymers

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail
SCL: Specific Concentration Limit
UN: United Nations
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe (Regulation for water hazardous substances, German regulation)

Full text of H-Statements referred to under section 3, if applicable.

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
H302	Harmful if swallowed
H411	Toxic to aquatic life with long lasting effects

End of EU - Safety Data Sheet