

**PolyDetector HRP Green Kit
 Safety Data Sheet**

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product: **PolyDetector HRP Green kit**

Catalog Numbers:

BSB 0128	PolyDetector HRP Green kit, 15 ml, (150 Tests)
BSB 0129	PolyDetector HRP Green kit, 50 ml, (500 Tests)
BSB 0130	PolyDetector HRP Green kit, 100 ml, (1000 Tests)
BSB 0131	PolyDetector HRP Green kit, 200 ml, (2000 Tests)
BSB 0132	PolyDetector HRP Green kit, 500 ml, (5000 Tests)
BSB 0133	PolyDetector HRP Green kit, 1000 ml, (10000 Tests)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Recommended use: Immunohistochemistry (IHC) and *in situ* Hybridization of Nucleic Acids (ISH)

1.3 Details of the supplier of the safety data sheet

Manufacturer: Bio SB, Inc.
 Street Address: 69 Santa Felicia Dr.
 City, State, Zip, Country: Santa Barbara, CA 93117, USA
 Technical Phone: +1-805-692 2768
 Fax: +1-805-692 2769
 e-mail: info@biosb.com

1.4 Emergency telephone number

Telephone number: +1-805-692 2768 (9 AM - 5 PM PST, M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the mixture

Classification (EC 1272/2008)
 Physical and Chemical Hazards: Not classified.
 Human health: Muta. 2 - H341; Carc. 1B - H350
 Environment: Not classified.
 Classification (1999/45/EEC): Carc. Cat. 2; R45. Muta Cat. 3; R68.

The Full Text for all H and R-Phrases and Hazard Statements are Displayed in Section 16.

2.2 Label elements

Contains

Tetramethylbenzidine, Ethylene Glycol, Glyoxaline and Hydrogen Peroxide



Label In Accordance With (EC) No. 1272/2008

Signal Word

Danger

Hazard Statements

H314

Causes severe skin burns and eye damage.

H360

May damage fertility or the unborn child.

Precautionary Statements

P201

Obtain special instructions before use

P202

Do not handle until all safety precautions have been read and understood.

P280

Wear protective clothing, gloves, eye and face protection.

P308+313

IF exposed or concerned: Get medical advice/attention.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/ physician.

2.3 Other information

None

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ethylene Glycol

<80%

CAS-No.: 107-21-1

EC No.: 203-473-3

Classification (EC 1272/2008)

Classification (67/548/EEC)

Not classified

[Xn] R22

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

3,3',5,5' - Tetramethylbenzidine

<5%

CAS-No.: 54827-17-7

EC No.: 259-364-6

Classification (EC 1272/2008)

Classification (67/548/EEC)

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3),

Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

Glyoxaline

<5%

CAS-No.: 288-32-4
Classification (EC 1272/2008)
Acute Tox. 4; Skin Corr. 1B;
Repr. 1B; H302, H314, H360D

EC-No.: 206-019-2
Classification (67/548/EEC)

The Full Text for all H and R-Phrases and Hazard Statements are Displayed in Section 16.

Hydrogen Peroxide

<1%

CAS-No.: 7722-84-1
Classification (EC 1272/2008)
Ox. Liq. 1; Acute Tox. 4;
Skin Corr. 1A;
H271, H302 + H332, H314

EC-No.: 231-765-0
Classification (67/548/EEC)

The Full Text for all H and R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation	In case of inhalation of spray mist: Move person into fresh air and keep at rest. Get medical attention if any discomfort continues. If breathing stops, provide artificial respiration. Get medical attention immediately!
Ingestion	Immediately rinse mouth and drink plenty of water (200-300 ml). DO NOT INDUCE VOMITING! NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Get medical attention.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
Eye contact	Promptly wash eyes with plenty of water while lifting the eye lids. Make sure to remove any contact lenses from the eyes before rinsing. Continue to rinse for at least 15 minutes. Obtain medical attention and bring these instructions.

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

Inhalation	May cause coughing or mild irritation.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	May cause temporary eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

No specific first aid measures noted. Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media Fire can be extinguished using: Water spray. Foam. Powder.

5.2. Special hazards arising from the substance or mixture

Specific hazards The product is non-combustible. If heated, irritating vapors may be formed. Hydrogen chloride (HCl). When heated and in case of fire, very toxic nitrogen oxides are formed.

5.3. Advice for firefighters

Protective equipment for fire-fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Stop leak if possible without any risk. Remove or isolate all sources of ignition. Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Do not allow to enter drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Absorb spillage with suitable absorbent material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Provide adequate ventilation, including appropriate local extraction, to ensure that the defined occupational exposure limit is not exceeded. Avoid inhalation of vapors/spray and contact with skin and eyes. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Refer to product label.

Storage Class: Refer to product datasheet.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name:	Ethylene Glycol	
Workplace Exposure Limit:	UK - 8 hour TWA: 60 mg/m ³	UK - 15 min. STEL: 125 mg/m ³

Name:	Hydrogen Peroxide	
Workplace Exposure Limit:	USA - 8 hour TWA: 1 ppm	

8.2. Exposure controls

Protective equipment	Impermeable gloves and safety glasses
Process conditions	Provide eyewash station.
Engineering measures	Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of spray.
Respiratory equipment	No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.
Hand protection	Use suitable protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Not suitable for permanent contact. Frequent change is advisable. Latex or Nitrile gloves; thickness 0.11 mm, ASTM F1671, DIN EN 374 or equivalent; AQL 1.5.
Eye protection	If risk of splashing, wear safety goggles or face shield. DIN 166 or equivalent.
Other Protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
Skin protection	Wear apron or protective clothing in case of contact. Wash contaminated clothing before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Color	Light yellow and clear liquid
Odor	Odorless
Solubility	Soluble in water.
Initial boiling point and boiling range	<100 @ 760 mm Hg
Melting point (°C)	~ 0°C
Relative density	~1 g/ml
pH	5.5 - 6.5
Vapor density (air=1)	Not determined
Vapor pressure	Not determined
Evaporation rate	Not determined
Viscosity	Not determined
Solubility Value (G/100G H2O@20°C)	Not determined
Decomposition temperature (°C)	Not determined
Flash point	Not applicable
Auto Ignition Temperature (°C)	Not determined
Flammability Limit - Lower(%)	Not applicable
Flammability Limit - Upper(%)	Not applicable
Partition Coefficient (N-Octanol/Water)	Not determined
Explosive properties	Not applicable
Oxidizing properties	Does not meet the criteria for oxidizing

9.2. Other information

None

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

Hazardous Polymerization Will not polymerize

10.4. Conditions to avoid

Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials To Avoid Strong alkalis, Acid anhydrides, Strong oxidizing agents

10.6. Hazardous decomposition products

Oxides of: Carbon oxides, nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid), Ammonia

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information	No information available
Acute toxicity:	Acute Toxicity (Oral LD50) Mouse 1834 mg/kg
Skin Corrosion/Irritation:	
Human Skin Model Test	Not determined
Serious eye damage/irritation:	Not determined
Respiratory sensitization	Not determined
Skin sensitization	Not determined
Germ cell mutagenicity (InVitro)	Not determined
Carcinogenicity	Not determined
Reproductive Toxicity – Fertility	Not determined
Specific target organ toxicity - single exposure:	
STOT - Single exposure	Not determined
Specific target organ toxicity - repeated exposure:	
STOT - Repeated exposure	Not determined
Aspiration hazard:	
Viscosity	Not determined
Inhalation	In high concentrations, vapors may irritate throat and respiratory system and cause coughing.
Ingestion	Harmful if swallowed.
Skin contact	Liquid may irritate skin. Not a skin sensitizer.
Eye contact	Spray and vapor in the eyes may cause irritation and smarting.

Health Warnings	Known or suspected mutagen. Known or suspected carcinogen for humans.
Route of entry	Ingestion. Skin and/or eye contact.
Toxicological information on ingredients.	3,3',5,5'-Tetramethylbenzidine, CAS-No.: 54827-17-7 Ethylene Glycol, CAS-No.: 107-21-1 Glyoxaline, CAS-No.: 288-32-4 Hydrogen Peroxide, CAS-No.:7722-84-1

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity There are no data on the ecotoxicity of this product.

12.1. Toxicity

Acute Toxicity – Fish Not determined

12.2. Persistence and degradability

Degradability There are no data on the degradability of this product. This product is expected to be not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation. The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not determined

12.4. Mobility in soil

Mobility: The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Not expected to be PBT or vPvB

12.6. Other adverse effects

Not determined

SECTION 13: DISPOSAL CONSIDERATIONS

General information Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORTATION INFORMATION

General The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA,ADR/RID).

Road Transport Notes Not Classified

Rail Transport Notes Not classified

Sea Transport Notes Not classified
Air Transport Notes Not classified

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant No.

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.

SECTION 15: REGULATORY INFORMATION

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

Approved Code of Practice Classification and Labeling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.
Guidance Notes Workplace Exposure Limits EH40.

EU Legislation

Regulation (EU) No 453/2010 of 20 May 2010 Annex II and Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

General information Only trained personnel should use this material.
SDS No.: Revision B
Date: 12/13/2016

Risk Phrases In Full

R22	Harmful if swallowed
R45	May cause cancer.
R68	Possible risk of irreversible effects.
Acute Tox.	Acute toxicity
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H360D	May damage the unborn child.
Repr.	Reproductive toxicity
Skin Corr.	Skin corrosion

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy him or herself as to the suitability of such information for his own particular use.

Bio SB shall not be held responsible for any damage resulting from the use of the above product or the information contained in this safety datasheet.

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