Mohs PolyDetector HRP Plus Green Detection System
Mohs PolyDetector HRP Green Substrate Detection System Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product: **Mohs PolyDetector Plus HRP Green Detection System**
Mohs PolyDetector HRP Green Detection System

Product Numbers:

Catalogue #	Presentation	Volume
BSB-0356-100	Mohs Mouse/Rabbit PolyDetector Plus HRP Green	100 mL
BSB-0356-15	Mohs Mouse/Rabbit PolyDetector Plus HRP Green	15 mL
BSB-0356-5	Mohs Mouse/Rabbit PolyDetector Plus HRP Green	5 mL
BSB-0356-50	Mohs Mouse/Rabbit PolyDetector Plus HRP Green	50 mL
BSB 0310S	Mohs Mouse/Rabbit PolyDetector HRP Green Detection System	5.0 ml
BSB 0310	Mohs Mouse/Rabbit PolyDetector HRP Green Detection System	15.0 ml
BSB 0311	Mohs Mouse/Rabbit PolyDetector HRP Green Detection System	50.0 ml
BSB 0312	Mohs Mouse/Rabbit PolyDetector HRP Green Detection System	100.0 ml

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

Recommended use: Immunohistochemistry (IHC) reagent for *in vitro* diagnostics.

1.3 Details of the supplier of the safety data sheet

Manufacturer Bio SB, Inc.
Street Address 5385 Hollister Ave. Building 8, Suite #108
City, Sate, Zip, Country Santa Barbara, CA USA 93111, USA
Technical Phone: +1-805-692 2768
Fax: +1-805-692 2769
E-mail: sales@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

According to OSHA Hazard Communication Standard (29 CFR 1910.1200) this mixture is classified as hazardous based on the physical and/or chemical nature and/or concentration of ingredients.

Classification (EC 1272/2008): The product is classified as hazardous in accordance with Regulation (EC) No 1272/2008 (GHS/CLP).

Classification system: The classification was made according to the latest editions of international substances lists and expanded upon from company and literature data.

2.2 Label elements

Label in Accordance With (EC) No. 1272/2008 (GHS/CLP)

Human health: Muta. 2 - H341;Carc. 1B - H350

Contains: Tetramethylbenzidine, Ethylene Glycol, Glyoxaline and Hydrogen Peroxide

Hazard Pictograms: GHS08, GHS05

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.

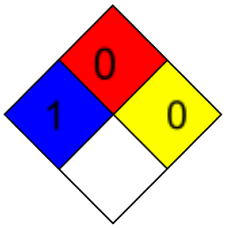
2.3 Other information

Hazards not otherwise classified: Hazards not otherwise classified (HNOC) or not covered by GHS-

The Full Text for all Hazard Statements are displayed in Section 16. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and do not require report in this section. Occupational exposure limits, if available, are listed in Section 8.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Chemical Description: Mixture

NFPA Scale: 0 - 4			
HMIS (U.S.A.) Scale: 0 - 4	**HEALTH**		**1**

Mohs PolyDetector HRP Plus Green Detection System
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FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		B

Component	Chemical Name	Conc. %	CAS#	EC#	Classification (pure ingredient)	Classification kit
HRP Green Buffer	Hydrogen Peroxide	<0.1	772284-1	231-765-0	Ox. Liq 1; Acute Tox. 4;Skin corr. 1A. H271,H302 +H332+H314	Not subject to classification in this product mixture and concentration
	Glyoxaline	<5%	288-32-4	206-019-2	Acute Tox. 4; Skin Corr. 1B; Repr. 1B; H302, H314, H360D	Acute Tox. 4; Skin Corr. 1B; Repr. 1B; H302, H314, H360D
HRP Green Chromogen	Proprietary	<5	proprietary	proprietary	Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335	Skin irritation (Category 2), H315 Eye irritation (Category 2A), H319 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
	Ethylene Glycol	<80	107-21-1	203-473-3	EC 1272/2008): not classified 67/548/EEC: [Xn] R22	EC 1272/2008): not classified 67/548/EEC: [Xn] R22
PolyDetector Peroxidase Blocker	Sodium Azide (NaN_3)	⩽0.1	26628-22-8	247-852-1	Acute Tox. 2 (Oral), H300 Fatal if swallowed Acute Tox. 2 (inhalation), H330 Fatal if inhaled. Danger. Acute Tox. 1 (Dermal), H310 Fatal in contact with skin. Acute Tox.1 (acute) H400 Hazardous to the aquatic environment. Acute Tox.1 (chronic) H410 Very toxic to aquatic life with long lasting effects.	H303 – May be harmful if swallowed H315 Causes skin irritation H320 Causes eye irritation
	H_2O_2	<0.1	0007722-84-1	231-765-0	H271 Acute Tox. 4;H332 Acute Tox. 4; H302 Skin Corr. 1A;H314	Not subject to classification in this product mixture and concentration
PolyDetector Label	methyliso-thiazolone	<0.1	2682-20-4	220-239-6	Skin corr. 1B, Skin sensit. 1, Spec.targ. org. tox. - single exp. 3, Acute aq. tox. 1; H302, H314, H317, H331, H335, H400	Not subject to classification in this product mixture and concentration
	Bronidox L	<0.1	30007-47-7	250-001-7	Acute toxicity, Oral (Category 4), H302,Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Specific target organ toxicity - repeated exposure (Category	Not subject to classification in this product mixture and concentration

					2), H373 Short-term (acute) aquatic hazard (Category 3), H402 Long-term (chronic) aquatic hazard (Category 3), H412	
PolyDetector PLUS Label	methyliso thiazolone	<0.1	2682-20-4	220-239-6	Skin corr. 1B, Skin sensit. 1, Spec.targ. org. tox. - single exp. 3, Acute aq. tox. 1; H302, H314, H317, H331, H335, H400	Not subject to classification in this product mixture and concentration
	Bronidox L	<0.1	30007-47-7	250-001-7	see above	Not subject to classification in this product mixture and concentration
PolyDetector PLUS Link	methyliso-thiazolone	<0.1	2682-20-4	220-239-6	Skin corr. 1B, Skin sensit. 1, Spec.targ. org. tox. - single exp. 3, Acute aq. tox. 1; H302, H314, H317, H331, H335, H400	Not subject to classification in this product mixture and concentration
	Bronidox L	<0.1	30007-47-7	250-001-7	see above	Not subject to classification in this product mixture and concentration

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and do not require report in this section. Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

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. Generally, the product does not irritate the skin.

Eye contact: Promptly wash eyes with plenty of water while lifting the eyelids. 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.

Self-protection of the first aider: Use personal protective equipment as required.

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
If seeking medical attention show Safety Data Sheet to physician. Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Extinguishing media: Fire can be extinguished using: Water spray. Alcohol resistance Foam, Powder

5.2. Special hazards arising from the substance or mixture
Specific hazards: IThe 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 NIOSH/MSHA (approved or equivalent) breathing apparatus and full protective chemical resistant clothing, gloves, and eye protection must be worn. In case of fire. use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Minimize direct contact with skin or eyes and prevent inhalation. Stop the leak if possible without any risk. Remove or isolate all sources of ignition. For personal protection see section 8.

6.2. Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not allow it 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 suitable waste containers, seal securely and deliver for disposal according to local regulations. Flush with plenty of water to clean the 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. For precautions see section 2.

7.2. Conditions for safe storage, including any incompatibilities
Store in a tightly closed original container in a dry, cool and well-ventilated place. Refer to the product label.

Store at 2-8°C.

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

Components with workplace control parameters:

Workplace Exposure Limit:

Name:	Ethylene Glycol	
Workplace Exposure Limit:	UK - 8 hour TWA: 60 mg/m3	UK - 15 min. STEL: 125 mg/m3
Name:	Hydrogen Peroxide	
Workplace Exposure Limit:	USA - 8 hour TWA: 1 ppm	

8.2. Exposure controls

Protective equipment:	Impermeable gloves and Chemical splash safety glasses when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.
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 if risk assessment shows air purifying respirators are appropriate, use masks with approved filter. Use only devices approved by competent authorities like NIOSH (USA) and CEN (EU). Respiratory protection must be used if the general level exceeds the recommended occupational exposure limit.
Hand protection:	Use suitable chemical resistant protective gloves if risk of skin contact. The most suitable glove must be chosen in consultation with the glove's supplier, who can inform you about the breakthrough time of the glove material. Frequent change is advisable. Latex or Nitrile gloves; thickness 0.11 mm, ASTM F1671, DIN EN 374 or equivalent; AQL 1.5.
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.
Eye protection:	If there is a risk of splashing, wear safety goggles or a face shield. DIN 166 or equivalent.
Skin protection:	Wear an apron or protective clothing in case of contact. Wash contaminated clothing before reuse. Wash thoroughly after handling.
Control of Environmental Exposure:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance:	Liquid
Color	Light yellow (Chromogen), clear (Cubstrate), orange (Label) yellow (Link)
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: No further relevant information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity: There are no known reactivity hazards for these concentrations when handling the product according to its intended use.

10.2. Chemical stability: Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions: Will not polymerize.

10.4. Conditions to avoid: Avoid exposure to high temperatures, or direct sunlight.

10.5. Incompatible materials: Strong alkalis, Acid anhydrides, Strong oxidizing agents

10.6. Hazardous decomposition products:

Additional information:	In the event of fire see section 5.
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

12.1. Ecotoxicity

Toxicological information:	
Acute toxicity:	No data available on the ecotoxicity of this product.
Other	Acute toxicity fish-not determined.

12.2. Persistence and degradability

Degradability:	No data available 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:	Miscible in water. May spread in water systems.
12.5. Results of PBT and vPvB assessment	This mixture is not expected to contain any substances assessed to be a 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

Waste Disposal Methods:	Dispose of waste and residues in accordance with local authority requirements.
Product/Packaging Disposal:	Decisions on the appropriate waste management method must be in line with local, regional and national regulations.

SECTION 14: TRANSPORTATION INFORMATION

General: This substance is considered to be non-hazardous for transport (including air transport). The product is not covered by international regulation on the transport of dangerous goods [IMDG, IATA, ADR/RID, DOT (US)].

14.1. UN number

ADR ADN, IMDG, IATA: Not classified.

14.2. UN proper shipping name

ADR, ADN, IMDG, IATA: Not classified.

14.3. Transport hazard class(es) - if shipped as a part of a kit : Not applicable.

14.4. Packing group

ADR, ADN, IMDG, IATA: 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 MARPOL 73/78 and the IBC Code: Not applicable.

Transport/Additional information: Not classified as dangerous in the meaning of transport regulations as issued in the latest version.

SECTION 15: REGULATORY INFORMATION

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

Labelling according to Regulation (EC) No 1272/2008 See Section 2.

Directive 2012/18/EU: Named dangerous substances - ANNEX I

REGULATION (EC) No 1907/2006 REACH ANNEX XVII Conditions of restriction: None classified.

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.

SARA 302 /304 Components

Classification: This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimus) reporting levels established by SARA Title III, Section 302/304.

SARA 311/ 312 Components

Classification: This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimus) reporting levels established by SARA Title III, Section 311/312.

SARA 313 Components

Classification: TThe following components are subject to reporting levels established by SARA Title III, Section 313: Ingredients ethylene glycol CAS # 107-21-1

SARA 355 (extremely hazardous substances: None of the ingredients are listed.

Toxic substances control Act; TSCA 8 (a) CDR Exempt/Partial Exemption: Water CAS # 7732-18-5; Hydrogen Peroxide CAS # 7722-84-1

Clean Water Act (CWA (33 U.S.C. § 1321)) 311: No products listed

Clean Air Act (CAA) 112 regulated toxic substances: No products listed

California Prop 65: **WARNING:** This product contains chemicals known to the State of California to cause cancer,birth defects, or any other reproductive harm.
Ingredients: Ethylene Glycol

Massachusetts, New Jersey, Pennsylvania, Rhode Island Right to Know Components

Hydrogen Peroxide CAS # 7722-84-1
Ethylene Glycol CAS # 107-21-1

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, 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 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 by Bio SB.

SECTION 16: OTHER INFORMATION

Hazard Statements In Full	
H350	May cause cancer.
H341	Suspected of causing genetic defects.
Abbreviations and Acronyms:	
OSHA (USA)	Occupational Safety and Health Administration
NFPA	National Fire Protection Association
H.M.I.S (USA)	Hazardous Material Identification System
SARA	Superfund Amendments and Reauthorization Act
IMDG	International Maritime Organization
IATA	International Air Transportation Association
ADR/RID	European Agreements Concerning the International Carriage of Dangerous Goods by Rail (**RID**) and by Road (**ADR**)
DOT (US)].	U.S Department of Transportation
GHS:	Globally Harmonised System of Classification and Labelling of Chemicals
EINECS:	European Inventory of Existing Commercial Chemical Substances
ELINCS:	European List of Notified Chemical Substances
CAS:	Chemical Abstracts Service (division of the American Chemical Society)
DNEL:	Derived No-Effect Level (REACH)
PNEC:	Predicted No-Effect Concentration (REACH)
PBT:	Persistent, Bioaccumulative and Toxic
SVHC:	Substances of Very High Concern
vPvB:	very Persistent and very Bioaccumulative
General information:	Only trained personnel should use this material
SDS No.: 00046 Version #: 1	
Date:	03/15/2021

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 their 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 data sheet.

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