Bio SB
BIOSCIENCE FOR THE WORLD

Santa Barbara, CA USA 93111, USA

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Antibodies for Immunochemistry and Immunofluorescence
Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

1.1 Product identifier

Product: Concentrated and prediluted solutions of conjugated monoclonal or polyclonal antibodies in aqueous Tris-base antibody stabilization solution (NaN3 <0.01%).

Catalog Numbers:

Applicable to all Bio SB Inc. manufactured concentrated and prediluted antibodies with catalog number series: BSB 2xxx, BSB 3xxx, BSB 5xxxx and BSB 6xxxx series

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

Recommended use: Immunohistochemistry (IHC) and ImmunoFluorescence (IF) for IVD (In-Vitro Diagnostics), RUO (Research Use Only), or ASR (Analyte Specific Reagent).

Not intended for use in humans or animals.

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 non-hazardous based on the physical and/or chemical nature and/or concentration of ingredients.

Classification (EC 1272/2008): The product is classified as non-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)

Hazard Pictograms: GHS07
Signal Word: Warning

Hazard Statements:

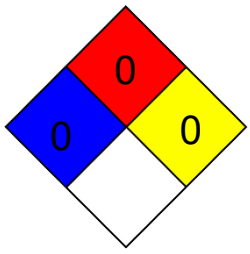
H303	May be harmful if swallowed
H315	Causes skin irritation
H320	Causes eye irritation

Precautionary Statements:

Prevention:
P302+ P352 - IF ON SKIN: Wash with plenty of soap and water
P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes.
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:
P403+ P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents and container in accordance with all local, regional, national and international regulations.

Classification system:

NFPA Scale: 0 - 4		
HMIS (U.S.A.) Scale: 0 - 4	HEALTH	0
	FLAMMABILITY	0
	PHYSICAL HAZARD	0
	PERSONAL PROTECTION	C

2.3 Other information

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

This product contains ≤ 0.1% Sodium azide, a biocidal preservative, is harmful if swallowed; it has been evident to kill at low concentrations if enough is ingested (more than supplied in this product). May cause eye, skin or tissue irritation. The potential for these adverse health effects is unknown for the highly diluted, small volume of sodium azide in this concentration, but is unlikely if handled appropriately with the requisite Good Laboratory Practices and Universal Precautions.

Although it is not considered hazardous at this level, please note that accumulated sodium azide may react with lead or copper plumbing to form highly explosive metal azides. Thorough flushing of plumbing is recommended.

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 contains TBST with bovine serum albumin preserved with sodium azide as an anti-microbial.

Chemical Name	Conc.	CAS#	EC#	Classification (pure ingredient)	Classification Mixture
Sodium Azide (NaN_3)	≤0.1% (w/v)	26628-22-8	247-852-1	 Danger. Acute Tox. 2 (Oral), H300 Fatal if swallowed. Danger. Acute Tox. 2 (inhalation), H330 Fatal if inhaled. Danger. Acute Tox. 1 (Dermal), H310 Fatal in contact with skin. Warning. Acute Tox.1 (acute) H400 Hazardous to the aquatic environment. Warning. 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
TBS	-	-	-	. Not Classified	Not subject to classification in this product mixture and concentration
Stabilizer proteins	-	-	-	Not Classified	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 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.
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:	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 (NOx) 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 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 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 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
Components with workplace control parameters:
Name: Sodium Azide <0.1%
Workplace Exposure Limit:

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 face shield. DIN 166 or equivalent.
Skin protection:	Wear 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:	Clear (Concentrated), Green (Prediluted)
Odor:	Odorless
Odor Threshold:	Not determined
Initial boiling point and boiling range:	<100 @ 760 mm Hg
Melting point (°C):	~0°C
Flash Point:	Not applicable
Evaporation rate	Not determined
Flammability Limit –(solid/gas):	Not applicable
Upper /Lower Flammability Limit (%):	Not applicable
Vapor density (air=1):	Not determined
Vapor pressure:	Not determined
Relative density:	~1 g/ml
Solubility:	Soluble in Water
Solubility Value (G/100G H2O@20°C):	Not determined
Partition Coefficient (N-Octanol/Water):	Not determined
Auto Ignition Temperature (°C):	Not determined
Decomposition temperature (°C):	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 hazard 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: Dangerous reactions are not to be expected for these concentrations when handling the product according to its intended use.Will not polymerize.

10.4. Conditions to avoid: Avoid exposure to fire, static electricity, or direct sunlight.

10.5. Incompatible materials: Strong oxidizers, strong acids or alkalis.

10.6. Hazardous decomposition products:
Additional information: None known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Toxicological information	
Acute toxicity:	Sodium Azide (not mixture): LD50 Oral - Rat - 27mg/kg
Dermal:	No data available
Skin Corrosion/Irritation:	May be irritating to skin and mucous membranes.
Human Skin Model Test:	No data available
Serious eye damage/irritation:	May be irritating to the eye
Respiratory sensitization:	May cause irritation
Skin sensitization:	May cause skin irritation
Germ cell mutagenicity (InVitro):	Not determined for these concentrations,Sodium Azide is a known mutagen.
Carcinogenicity:	No component of this product are identified as probable, possible or confirmed human carcinogen by IARC, NTP, or OSHA.
Reproductive Toxicity – Fertility:	No data available
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:	Eye and nasal irritation, irritation of the throat, slight cough, headache; no significant pathological changes anticipated at this concentration. Known or suspected mutagen. Known or suspected carcinogen for humans.
Route of entry:	Inhalation or dermal contact during production. Ingestion. Skin and/or eye contact.
Toxicological information on ingredients.	SODIUM AZIDE

SECTION 12: ECOLOGICAL INFORMATION

12.1. Ecotoxicity

Toxicological information:	
Acute toxicity:	No data available on the ecotoxicity of this product.
Other	May be harmful to aquatic life in very low concentrations.

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 applicable.

14.2. UN proper shipping name
ADR, ADN, IMDG, IATA Not applicable.

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 Sodium Azide may react with lead and copper plumbing to form explosive metal azides.

14.7. Transport in bulk according to Annex II of MARPOL73/78 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
Sodium Azide (NaN3) CAS-No. 26628-22-8

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: Sodium Azide (NaN3) CAS-No. 26628-22-8 1000 lb EPCRA RQ

SARA 311/ 312 Components
Classification: Sodium Azide (NaN3) CAS-No. 26628-22-8

SARA 313 Components
Classification: Sodium Azide (NaN3) CAS-No. 26628-22-8

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

Toxic substances control Act; TSCA 8 (a) CDR Exempt/Partial Exemption: Not determined.
Clean Water Act (CWA (33 U.S.C. § 1321)) 311: All of the components of this mixture are listed.

Clean Air Act (CAA) 112 regulated toxic substances: Sodium Azide (NaN_3) CAS-No. 26628-22-8

California Prop 65: This product does not contain any chemicals known to State of California to cause cancer,birth defects, or any other reproductive harm.

Massachusetts: The following components are listed Sodium Azide CAS-No. 26628-22-8

New Jersey: The following components are listed Sodium Azide CAS-No. 26628-22-8

Pennsylvania: The following components are listed Sodium Azide CAS-No. 26628-22-8

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

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.: 0001	Revision E
Date:	04/17/2020

Antibodies for Immunochemistry and Immunofluorescence Safety Data Sheet

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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