



MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY

- ◆ **Product name:** BCA Protein Assay Kit
- ◆ **Catalog number:** BCA2500
- ◆ **Chemical name or synonyms:** none
- ◆ **Kit contains:**
 - *BCA Protein Assay Kit Reagent A*
 - *BCA Protein Assay Kit Reagent B*
 - *Set of 5 Bovine serum Albumin standards*

◆ **Contact :**

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BCA Reagent A

- ◆ **Product name:** BCA Reagent A
- ◆ **Catalog number:** Part of BCA2500

SECTION 2 – HAZARDS IDENTIFICATION

- ◆ **GHS Classification**
No
- ◆ **GHS Label element**
Signal Word: None
Hazard Statements: None
Pictograms: None
- ◆ This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **May cause skin irritation and/or dermatitis.**
- ◆ This product contains hazardous carcinogens (Yes; No; N/A): **No**
- ◆ This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient name	CAS number	%	Classification
Sodium carbonate	497-19-8	1-5	Eye Irrit. 2, H319
2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt	979-88-4	0.5-1	Eye Irrit. 2, H319
Sodium Hydroxyde	1310-73-2	0.05-0.5	Met. Corr. 1, H290 Skin Corr. 1A, H314 Aquatic Acute 3, H402

Components with very limit values (traces) that require monitoring at the workplace:
Sodium chloride, (CAS 7647-14-5, EINECS : 231-598-3), 0.9%

This product contains hazardous ingredients (yes; no; n/a; n/i): **yes**
This product contains hazardous carcinogens (y; n; n/a; n/i): **no**

SECTION 4-HEALTH HAZARD DATA

4.1. Description of first aid measures

First-aid measures after inhalation :	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact :	Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact :	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion :	Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.

4.3. Immediate medical attention

Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

6.1.1. FOR NON-EMERGENCY PERSONNEL

EMERGENCY PROCEDURES : VENTILATE SPILLAGE AREA. AVOID CONTACT WITH SKIN AND EYES.

6.1.2. FOR EMERGENCY RESPONDERS

PROTECTIVE EQUIPMENT : DO NOT ATTEMPT TO TAKE ACTION WITHOUT SUITABLE PROTECTIVE EQUIPMENT. FOR FURTHER INFORMATION

REFER TO SECTION 8: "EXPOSURE CONTROLS/PERSONAL PROTECTION".

6.2. ENVIRONMENTAL PRECAUTIONS

AVOID RELEASE TO THE ENVIRONMENT.

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

METHODS FOR CLEANING UP : TAKE UP LIQUID SPILL INTO ABSORBENT MATERIAL.

OTHER INFORMATION : DISPOSE OF MATERIALS OR SOLID RESIDUES AT AN AUTHORIZED SITE.

SECTION 7 – HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at 4°C avoiding direct light.

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

◆ Ventilation Data:

- Provide adequate general exhaust ventilation.

◆ Respiratory Protection:

- None required if ventilation is adequate.

◆ Protective Gloves:

- Rubber or chemical resistant gloves should be worn.

◆ Other Protective Equipment:

- Safety glasses with side shields are advised. Eye wash stations and deluge showers should also be available. Finally, a lab coat should be worn.

◆ Other Engineering Controls:

sodium hydroxide (1310-73-2)

ACGIH Ceiling (mg/m³) 2 mg/m³ (Sodium hydroxide; USA; Momentary value;

TLV - Adopted Value

◆ Work Practices:

- Good laboratory technique should be used when handling this product. Do not mouth pipette. Observe appropriate chemical hygiene. Avoid contact with skin or eyes.

◆ Hygienic Practices:

- Do not eat, drink, or smoke while working with reagents. Upon completion of work activities involving this product, wash any exposed body areas thoroughly with soap and water.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : Liquid
- Color : No data available
- Odor : No data available
- Odor threshold : No data available
- pH : No data available
- Melting point : Not applicable
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Relative evaporation rate (butyl acetate=1) : No data available
- Flammability (solid, gas) : Not applicable.
- Vapor pressure : No data available
- Relative vapor density at 20 °C : No data available
- Relative density : No data available
- Solubility : No data available
- Log Pow : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosion limits : No data available
- Explosive properties : No data available
- Oxidizing properties : No data available

SECTION 10-REACTIVITY DATA

- ◆ **Stability and reactivity:**
The product is stable under recommended storage conditions.
- ◆ **Incompatibility (material to avoid):**
N/A
- ◆ **Hazardous Decomposition Products:**
Not applicable
- ◆ **Will Hazardous Polymerization Occur:**
Will not occur
- ◆ **Condition to avoid/stability:**
Excess heat, flame or pressure.
- ◆ **Unusual Fire and Explosion Hazards:**
Product does not present an explosion hazard

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity : Not classified

sodium carbonate (497-19-8)

LD50 oral rat 2800 mg/kg (Rat; Experimental value)

LD50 dermal rabbit > 2000 mg/kg (Rabbit; Experimental value)

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure

: Not classified Aspiration hazard : Not classified

Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.

◆ **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

SECTION 12: ECOLOGICAL INFORMATION

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

sodium carbonate (497-19-8)

LC50 fish 1 300 mg/l (LC50; Other; 96 h; Lepomis macrochirus; Static system; Fresh water; Experimental value)

Threshold limit algae 1 242 mg/l (EC50; 5 days; Algae)

sodium hydroxide (1310-73-2)

LC50 fish 1 45.4 mg/l (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

sodium carbonate (497-19-8)

Persistence and degradability Biodegradability: not applicable. Low potential for adsorption in soil.

ThOD Not applicable (inorganic)

sodium hydroxide (1310-73-2)

Persistence and degradability Biodegradability: not applicable. No (test) data on mobility of the substance available.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)

Persistence and degradability Biodegradability in water: no data available.

12.3. Bioaccumulative potential

sodium carbonate (497-19-8)

Log Pow -6.19 (Estimated value)

Bioaccumulative potential Low potential for bioaccumulation (Log Kow < 4).

sodium hydroxide (1310-73-2)

Bioaccumulative potential No bioaccumulation data available.

(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)

Bioaccumulative potential No bioaccumulation data available.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from this product.

SECTION 13: DISPOSAL CONSIDERATIONS

◆ **Waste treatment methods**

Recommendation

Hand over to hazardous waste disposers.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

◆ **Uncleaned packagings:****Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agent:** Water, if necessary with cleansing agents.**SECTION 14 – TRANSPORT INFORMATION****Note** Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

D.O.T.: Not regulated.

IATA.: Not regulated.

IMDG: Not regulated.

SECTION 15 – OTHER INFORMATION**BCA Solution (BCA Reagent A)**

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

sodium carbonate (497-19-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

sodium hydroxide (1310-73-2)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Not subject to reporting requirements of the United States SARA Section 313

CERCLA RQ 1000 lb

(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16– OTHER INFORMATION• **Full text of H-phrases:**

H290 May be corrosive to metals

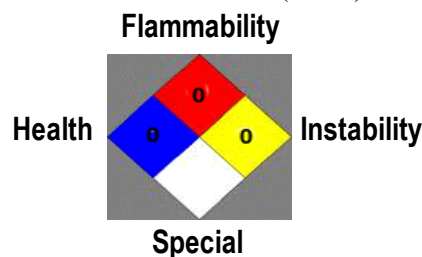
H314 Causes severe skin burns and eye damage

H319 Causes serious eye irritation

H402 Harmful to aquatic life

◆ **Hazardous Material Information System (U.S.A.):**

Health	0
Fire hazard	0
Reactivity	0
Personal protection	

◆ **National Fire Protection Association (U.S.A.):**

0 = not significant

1 = slight

2 = moderate

3 = high

4 = extreme

* = chronic

◆ **Revisions:**

Issue Date: 04/08/2017

Last Revision Date: 04/08/2017

Revision note:

◆ **Steps to be taken in Case Material is Released or Spilled:**

Ventilate the area. Initiate cleaning up immediately. If the product is dry, mop up. If the product is a solution, use an absorbent material to contain/pick up the spilled solution. Once spent, place all the contaminated disposables into a suitable container, seal, label and dispose.

◆ **Waste Disposal Method:**

Dispose in accordance with governmental environmental regulations.

◆ **Measure for environmental protection :**

Dilute with plenty of water. Do not allow to enter sewers/ surface or ground water.

◆ **Precaution to be taken in Handling and Storage:**

See package insert for storage information.

◆ **Maintenance Precautions:**

N/A

◆ **Other Precautions:**

N/A

◆ **Other Comments:**

N-No, Y-Yes, N/A-Not Applicable, N/I-No Information.

The information provided is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. OZ Biosciences shall not be held liable for any damage resulting from handling or from contact with the product.

MSDS Reagent B

- ◆ **Product name:** BCA Reagent B
- ◆ **Catalog number:** Part of BCA2500

SECTION 2 – HAZARDS IDENTIFICATION

◆ **Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

Corrosive to metals (Category 1), H290

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 2), H371

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Xn Harmful R20/21/22, R68/20/21/22

Xi Irritant R36/38

◆ **Label elements**

Labelling according Regulation (EC) No 1272/2008

Pictogram:



Hazard statement(s)

Hazard statements (GHS-US) :

H401 - Toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

Precautionary statements (GHS-US) :

P273 - Avoid release to the environment

P391 - Collect spillage

P501 - Dispose of contents/container to

P260 Do not breathe dust/
fume/ gas/ mist/ vapours/ spray.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

Supplemental Hazard
Statements

none

SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient name	CAS number	%	Classification
Water	7732-18-5	>80%	None
copper(II) sulfate, pentahydrate	7758-99-8	1-5	Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319

			Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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This product contains hazardous ingredients (yes; no; n/a; n/i): yes
This product contains hazardous carcinogens (y; n; n/a; n/i): no

SECTION 4-HEALTH HAZARD DATA

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
 First-aid measures after skin contact : Wash skin with plenty of water.
 First-aid measures after eye contact : Rinse eyes with water as a precaution.
 First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7 – HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
 Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

Storage temperature : ambient temperature

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

- ◆ **Ventilation Data:**
 - Provide adequate general exhaust ventilation.
- ◆ **Respiratory Protection:**
 - None required if ventilation is adequate.
- ◆ **Protective Gloves:**
 - Rubber or chemical resistant gloves should be worn.
- ◆ **Other Protective Equipment:**
 - Safety glasses with side shields are advised. Eye wash stations and deluge showers should also be available. Finally, a lab coat should be worn.
- ◆ **Other Engineering Controls:**
 - None
- ◆ **Work Practices:**
 - Good laboratory technique should be used when handling this product. Do not mouth pipette. Observe appropriate chemical hygiene. Avoid contact with skin or eyes.
- ◆ **Hygienic Practices:**
 - Do not eat, drink, or smoke while working with reagents. Upon completion of work activities involving this product, wash any exposed body areas thoroughly with soap and water.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

Physical state : Liquid
Color : No data available
Odor : No data available
Odor threshold : No data available
pH : No data available
Melting point : Not applicable
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : Not applicable.
Vapor pressure : No data available
Relative vapor density at 20 °C : No data available
Relative density : No data available
Solubility : No data available
Log Pow : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available

SECTION 10-REACTIVITY DATA

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Copper Solution (BCA Reagent B)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

06/20/2017 EN (English US) 4/7

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity : Not classified

copper(II) sulfate, pentahydrate (7758-99-8)

LD50 oral rat 300 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 482 mg/kg bodyweight; Rat)

LD50 dermal rabbit > 2000 mg/kg (Rabbit; Literature study; OECD 402: Acute Dermal Toxicity)

ATE US (oral) 300 mg/kg body weight

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated

exposure

: Not classified

Aspiration hazard : Not classified

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

copper(II) sulfate, pentahydrate (7758-99-8)

Threshold limit algae 2 0.368 mg/l (ErC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Pseudokirchneriella subcapitata; Static system; Fresh water; Read-across)

12.2. Persistence and degradability

copper(II) sulfate, pentahydrate (7758-99-8)

Persistence and degradability Biodegradability: not applicable. No (test)data on mobility of the substance available.

Biochemical oxygen demand (BOD) Not applicable

Chemical oxygen demand (COD) Not applicable

ThOD Not applicable

12.3. Bioaccumulative potential

copper(II) sulfate, pentahydrate (7758-99-8)

Bioaccumulative potential Bioaccumable.

12.4. Mobility in soil

copper(II) sulfate, pentahydrate (7758-99-8)

Ecology - soil Toxic to flora.

SECTION 13: DISPOSAL CONSIDERATIONS

◆ Waste treatment methods

Recommendation

Hand over to hazardous waste disposers.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

◆ Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14 – TRANSPORT INFORMATION

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III

UN-No.(DOT) : UN3082

Proper Shipping Name (DOT) : Environmentally hazardous substances, liquid, n.o.s.

Class (DOT) : 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 9 - Class 9 (Miscellaneous dangerous materials)

Dangerous for the environment : Yes

Marine pollutant : Yes

DOT Packaging Non Bulk (49 CFR 173.xxx) : 203

DOT Packaging Bulk (49 CFR 173.xxx) : 241

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102) :

8 - A hazardous substance that is not a hazardous waste may be shipped under the shipping description "Other regulated substances, liquid or solid, n.o.s.", as appropriate. In addition, for solid materials, special provision B54 applies.

146 - This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

173 - An appropriate generic entry may be used for this material.

335 - Mixtures of solids that are not subject to this subchapter and environmentally hazardous liquids or solids may be classified as "Environmentally hazardous substances, solid, n.o.s.," UN3077 and may be transported under this entry, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Each transport unit must be leak-proof when used as bulk packaging.

IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).

T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)

TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.

TP29 - A portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the MAWP of the hazardous materials, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 155

DOT Quantity Limitations Passenger aircraft/rail

(49 CFR 173.27)

: No limit

DOT Quantity Limitations Cargo aircraft only (49

CFR 175.75)

: No limit

DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

Other information : No supplementary information available.

TDG
Transport by sea
Marine pollutant : Yes

SECTION 15 – OTHER INFORMATION

15.1. US Federal regulations

copper(II) sulfate, pentahydrate (7758-99-8)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations**CANADA**

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

SECTION 16 – OTHER INFORMATION

Full text of H-phrases:

H301 Toxic if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H400 Very toxic to aquatic life

H401 Toxic to aquatic life

H410 Very toxic to aquatic life with long lasting effects

H411 Toxic to aquatic life with long lasting effects

◆ **Revisions:**

Issue Date: 04/08/2017

Last Revision Date: 04/08/2017

Revision note:

◆ **Other Comments:**

N-No, Y-Yes, N/A-Not Applicable, N/I-No Information.

The information provided is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. OZ Biosciences shall not be held liable for any damage resulting from handling or from contact with the product.

MATERIAL SAFETY DATA SHEET

BSA Standard

- ◆ **Product name:** BSA Standard
- ◆ **Catalog number:** Part of BCA2500

SECTION 2 – HAZARDS IDENTIFICATION

◆ **GHS Classification**

No

◆ **GHS Label element**

Signal Word: None
Hazard Statements: None
Pictograms: None

- ◆ This product contains hazardous ingredients (Yes; No; Not Applicable or no information): **No**
- ◆ This product contains hazardous carcinogens (Yes; No; N/A): **No**
- ◆ This product contains hazardous ingredients to the environment. (Yes; No; N/A): **No**

SECTION 3 – COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient name	CAS number	%	EINECS	Classification
Water	7732-18-5	>80%	231-791-2	None
Bovine serum albumin	7732-18-5	-	231-791-2	None

Components with very limit values (traces) that require monitoring at the workplace:

Sodium chloride, (CAS 7647-14-5, EINECS : 231-598-3), 0.9%

Sodium azide, (CAS 26628-22-8, EINECS : 247-852-1), 0.05%

This product contains hazardous ingredients (yes; no; n/a; n/i): **no**

This product contains hazardous carcinogens (y; n; n/a; n/i): **no**

SECTION 4-HEALTH HAZARD DATA

- ◆ **Health Effects (acute and chronic):**
Not significant Known Health Effects.
- ◆ **Primary Routes of Entry:**
Inhalation and ingestion
Eye contact from splashes possible
Readily absorbed through the skin.
- ◆ **Medical Conditions Aggravated by Exposure:**
Not known
- ◆ **Emergency First Aid Procedures:**
 - **Eye contact** – Flush contaminated eye(s) with large volumes of water for at least 15 minutes. Get medical attention if eye(s) remain irritated.
 - **Skin contact** – Flush contaminated areas with large volumes of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if skin remains irritated.
 - **Ingestion** – Keep victim warm and calm. Get immediate medical attention.
 - **Inhalation** – Move victim to fresh air. Give oxygen if breathing becomes difficult. Should breathing stop, give artificial respiration.
 - Wash contaminated clothing before reuse.

SECTION 5 – FIRE FIGHTING MEASURES

- ◆ **Flammability of the product:** May be combustible at high temperature.
- ◆ **Flash Point:** Not available.
- ◆ **Fire hazards in presence of various substances:** Not considered to be flammable.
- ◆ **Fire fighting media and instructions:** Use dry chemical, CO₂, water spray or foam.
- ◆ **Protective clothing (fire):** Be sure to use an approved/certified respirator or equivalent.
- ◆ **Hazardous thermal decomposition products:** Burning produces irritant fumes.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- ◆ **Personal precautions, protective equipment and emergency procedures**
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection see section 8.
- ◆ **Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- ◆ **Methods and materials for containment and cleaning up**
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
- ◆ **Reference to other sections**
For disposal see section 13.

SECTION 7 – HANDLING AND STORAGE

- ◆ **Handling and storage:**
 - *Information for safe handling:* Ensure good ventilation/exhaustion at the workplace. No special precautions are necessary if used correctly.
 - *Information about protection against explosions and fires:* No special measures required.
 - *Requirements to be met by storerooms and receptacles:* No special requirements.
 - *Information about storage in one common storage facility:* Not required.
 - *Further information about storage conditions:* Keep receptacle tightly sealed.
- ◆ **Stability and reactivity:**
 - *Thermal decomposition / conditions to be avoided:* No decomposition if used according to specifications.
 - *Dangerous reactions* No dangerous reactions known
 - *Dangerous products of decomposition:* No dangerous decomposition products known

SECTION 8 – EXPOSURE CONTROLS, PERSONAL PROTECTION

- ◆ **Ventilation Data:**
 - Provide adequate general exhaust ventilation.
- ◆ **Respiratory Protection:**
 - None required if ventilation is adequate.
- ◆ **Protective Gloves:**
 - Rubber or chemical resistant gloves should be worn.
- ◆ **Other Protective Equipment:**
 - Safety glasses with side shields are advised. Eye wash stations and deluge showers should also be available. Finally, a lab coat should be worn.
- ◆ **Other Engineering Controls:**
 - None
- ◆ **Work Practices:**
 - Good laboratory technique should be used when handling this product. Do not mouth pipette. Observe appropriate chemical hygiene. Avoid contact with skin or eyes.

◆ **Hygienic Practices:**

- Do not eat, drink, or smoke while working with reagents. Upon completion of work activities involving this product, wash any exposed body areas thoroughly with soap and water.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

◆ **Physical state and appearance:**

- *Standards of Bovine Serum Albumin* liquid, colorless and odorless

◆ **Melting point:**

- *Standards of Bovine Serum Albumin* 0°C

◆ **Boiling Point:**

- *Standards of Bovine Serum Albumin* undetermined

◆ **Flash point:** not applicable

◆ **Ignition temperature :** N/a

◆ **Auto igniting:** Product is not self-igniting

◆ **Vapor Pressure at 20 °C:** 23.0 hPa

◆ **Vapor density:** Not determined

◆ **Density at 20°C:** *Standards of Bovine Serum Albumin* 1 g/cm³

◆ **pH-value at 20°C:** 6.9, *Standards of Bovine Serum Albumin*

◆ **Solubility in Water:**

- *Standards of Bovine Serum Albumin* Soluble

◆ **Specific Gravity (water = 1):** ~1

◆ **Danger of explosion:** Products does not present an explosion hazard

◆ **Percent volatile by volume (%):** N/A

◆ **Evaporation Rate:** 0.36 (compared to butyl acetate)

◆ **Solvent contents:**

◆ *Standards of Bovine Serum Albumin* Organic solvents 0%, water 98.9%

SECTION 10-REACTIVITY DATA

◆ **Stability and reactivity:**

The product is stable under recommended storage conditions.

◆ **Incompatibility (material to avoid):**

Reactive with organic materials

◆ **Hazardous Decomposition Products:**

Not applicable

◆ **Will Hazardous Polymerization Occur:**

Will not occur

◆ **Condition to avoid/stability:**

Excess heat, flame or pressure.

◆ **Unusual Fire and Explosion Hazards:**

Product does not present an explosion hazard

SECTION 11: TOXICOLOGICAL INFORMATION

◆ **Standards of Bovine Serum Albumin acute toxicity**

Primary irritant effect : no irritant effect

Sensitization : no sensitizing effects known

◆ **Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure
no data available

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

no data available

SECTION 13: DISPOSAL CONSIDERATIONS

◆ Waste treatment methods

Recommendation

Hand over to hazardous waste disposers.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

◆ Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION 14 – TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

D.O.T.: Not regulated.

IATA.: Not regulated.

IMDG: Not regulated.

SECTION 15 – OTHER INFORMATION

◆ US Federal Regulations

RCRA (Lists of Hazardous Wastes,
40 CFR 261 Subpart D):

Not applicable

CLEAN AIR ACT (SEC. 112.
Hazardous Air Pollutants):

Not applicable

CLEAN WATER ACT (RQ, 40 CFR):

Not applicable

SARA Title III:

Section 302 -304, 40 CFR 355: Components present in this product at a level which could require reporting are:
none.

Section 311 - 312: Components present in this product at a level which could require reporting are:
none.

Section 313: Not applicable

TSCA Section 8(b) Inventory Status: All ingredients are listed on TSCA Inventory of Chemical Substances or exempt from TSCA Inventory requirements.

AICS Inventory Status: All ingredients are listed on the Australia Inventory of Chemical Substances.

State Lists

This product does not contain any Proposition 65 chemicals.

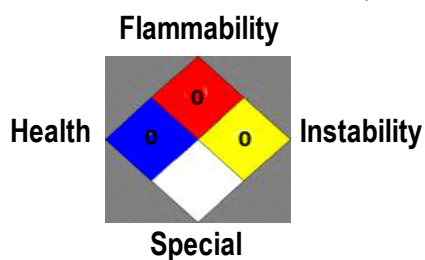
- ◆ This product is not classified according to the EU regulations.

SECTION 16– OTHER INFORMATION

- ◆ **Hazardous Material Information System (U.S.A.):**

Health	0
Fire hazard	0
Reactivity	0
Personal protection	

- ◆ **National Fire Protection Association (U.S.A.):**



- ◆ **Revisions:**

Issue Date: 22-May-2014

Last Revision Date: 04/08/2017

Revision note: New format..

- ◆ **Other Comments:**

To the best of our knowledge, the information contain herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Restriction of use: for research use only.

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