



MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY

- ◆ **Product name:** Bradford Protein Assay Kit
- ◆ **Catalog number:** BA00100
- ◆ **Chemical name or synonyms:** none
- ◆ **Kit contains:**
 - *1X Bradford reagent* –(catalog number BA00050)
 - *Standards of Bovine Serum Albumin* – (catalog number BA00070)
- ◆ **Contact :**

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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:



Signal word:

Warning

Hazard statement(s)

H290

May be corrosive to metals.

H315

Causes skin irritation.

H319

Causes serious eye irritation.

H371

May cause damage to organs.

Precautionary statement(s)

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

Bradford Protein Assay Kit MSDS Last Revision: 22-Aug-2016

Ingredient name	CAS number	%	EINECS	Classification
Water	7732-18-5	>80%	231-791-2	None
Orthophosphoric acid	7664-38-2	10-15%	231-633-2	Met. Corr. 1; Skin Corr. 1B; H290, H314
Methanol	67-56-1	5%	200-659-6	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301 + H311 + H331, H370
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):

yes

This product contains hazardous carcinogens (y; n; n/a; n/i):

no

SECTION 4-HEALTH HAZARD DATA

◆ Health Effects (acute and chronic):

Contain orthophosphoric acid (CAS: 7664-38-2) and methanol (CAS: 67-56-1).

Toxic if swallow or inhale. Risk of damage to eyes. Fumes may cause eyes irritation. May cause severe skin and respiratory tract irritation. The symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. **EXERCISE CAUTION AT ALL TIMES.**

◆ 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.

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◆ 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:

- *1X Bradford reagent* liquid, color brown, order recognizable
- *Standards of Bovine Serum Albumin* liquid, colorless and odorless

◆ Melting point:

- *1X Bradford reagent* undetermined
- *Standards of Bovine Serum Albumin* 0°C

◆ Boiling Point:

- *1X Bradford reagent* 64°C
- *Standards of Bovine Serum Albumin* undetermined

- ◆ **Flash point:** not applicable
- ◆ **Ignition temperature:** 455°C
- ◆ **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:**
 - o *1X Bradford reagent* fully miscible
 - o *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:**
 - o *1X Bradford reagent* Organic solvents 5%, water 85%
 - o *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

- ◆ **1X Bradford reagent acute toxicity : LD/LC50 values for hazardous components**

67-56-1 Methanol

Oral : LD50 5628 mg/kg (rat)
 Dermal : LD50 20000 mg/kg (rat)
 Primary irritant effect : no irritant effect
 Sensitization : no sensitizing effects known
 Additional toxicological information : harmful
 Target organs : Skin, respiratory tract.

- ◆ **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**◆ **UN number**

ADR/RID: 1805

IMDG: 1805

IATA: 1805

◆ **UN proper shipping name**

ADR/RID: PHOSPHORIC ACID SOLUTION

IMDG: PHOSPHORIC ACID SOLUTION

IATA: Phosphoric acid, solution

◆ **Transport hazard class(es)**

ADR/RID: 8

IMDG: 8

IATA: 8

Packaging group

ADR/RID: III

IMDG: III

IATA: III

◆ **Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

◆ **Special precautions for user**

no data available

SECTION 15 – OTHER INFORMATION**OSHA Hazards**

Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Toxic by skin absorption, Corrosive

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

The following components are subject to reporting levels established by SARA Title III, Section 313:

Methanol

CAS-No.
67-56-1Revision Date
2007-07-01**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Methanol

CAS-No.

Revision Date

Phosphoric acid	67-56-1 CAS-No. 7732-18-5	2007-07-01 Revision Date 1993-04-24
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Pennsylvania Right To Know Components

Water	CAS-No. 7732-18-5	Revision Date
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Phosphoric acid	CAS-No. 7732-18-5	Revision Date 1993-04-24

New Jersey Right To Know Components

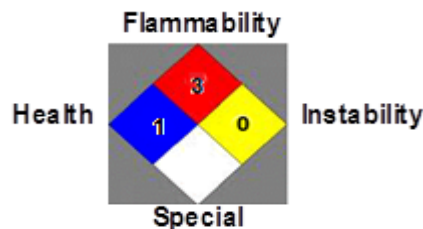
Water	CAS-No. 7732-18-5	Revision Date
Methanol	CAS-No. 67-56-1	Revision Date 2007-07-01
Phosphoric acid	CAS-No. 7732-18-5	Revision Date 1993-04-24

California Prop. 65 Components

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

SECTION 16– OTHER INFORMATION◆ **Hazardous Material Information System (U.S.A.):**

Health	1
Fire hazard	3
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: 22-May-2014
Last Revision Date: 22-Aug-2016
Revision note: New format. updated Section 2,8,15,16.

◆ **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.