



Conforms to regulation (EC) no. EU 453/2010

# SAFETY DATA SHEET

## SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product Identifier

**Product Name:** ProtoBlock System Reagent B

**Product Number:** CL-252B

### 1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

### 1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer	Agent
National Diagnostics 305 Patton Drive Atlanta, GA 30036 (404) 699-2121 (800) 526-3867 info@nationaldiagnostics.com	AGTC Bioproducts Unit 4 Fleet Business Park Itlings Lane, Hessle East Riding of Yorkshire HU139LX 44(0) 1482 646020 office@agtcbioproducts.com

### 1.4 Emergency Telephone Number

**Chemtrec**  
1-800 424-9300 (U.S. & Canada)  
01-703-527-3887 (outside U.S. & Canada)

## SECTION 2 - HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

Not a hazardous substance or mixture according to regulation (EC) No. 1272/2008.

### 2.2 Label Elements

This product has no labeling elements associated with EC directives or respective national laws.

### 2.3 Other Hazards

None found.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixture

#### Chemical Names/Description

Buffered solution with surfactants and 0.1% proprietary preservative.

#### Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Proprietary Preservative	0.1%			H300, H400, H410
Sodium Chloride	5 - 10%	7647-14-5	231-598-3	N.A.
Dipotassium Phosphate	< 5%	7758-11-4	231-834-5	N.A.
Polysorbate 20	< 5%	9005-64-5	500-018-3	N.A.

## SECTION 4 - FIRST AID MEASURES

### 4.1 Description of First Aid Measures

#### Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

#### Ingestion

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

#### Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

#### Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## 4.2 Most Important Symptoms and Effects, Both Acute and Delayed

### Inhalation

**Proprietary Preservative:**

Sore throat, coughing, dizziness, shortness of breath and fainting (also symptoms parallel to ingestion)

**Sodium Chloride:**

No information found.

**Dipotassium Phosphate:**

Not expected to be a health hazard by inhalation.

**Polysorbate 20:**

Not expected to be a health hazard by inhalation.

### Ingestion

**Proprietary Preservative:**

Breathlessness, pulmonary edema and rapid heartbeat within 5 minutes. Nausea, vomiting, headache, restlessness, and diarrhea may occur within 15 minutes. Other symptoms may include low blood pressure, abnormal breathing, reduced body temperature, reduced body pH, convulsions, collapse and death.

**Sodium Chloride:**

No information found.

**Dipotassium Phosphate:**

Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, cardiac effects and central nervous system effects.

**Polysorbate 20:**

Abdominal spasms, diarrhea.

### Skin

**Proprietary Preservative:**

Causes irritation, redness, and pain (also symptoms parallel to ingestion)

**Sodium Chloride:**

No information found.

**Dipotassium Phosphate:**

No adverse effects expected.

**Polysorbate 20:**

Redness, swelling.

### Eyes

**Proprietary Preservative:**

Irritation, redness, pain and blurred vision.

**Sodium Chloride:**

No information found.

**Dipotassium Phosphate:**

Pain and redness.

**Polysorbate 20:**

Pain, redness.

## 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

N.A.

### 5.2 Special Hazards Arising from the Substance/Mixture

#### Hazardous Combustion Products

N.A.

#### Hazardous Decomposition Products

May form lead/copper azide in laboratory plumbing.

## Hazardous Polymeriation

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

## 5.3 Advice for Firefighters

N.A.

## 5.4 Further Information

No data available.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### 6.1 Personal Precautions

Wear appropriate protective equipment as specified in Section 8.

### 6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

### 6.3 Methods and Materials for Containment and Cleaning Up

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum. Scrub spill area with detergent, flush with copious amounts of water.

### 6.4 References to Other Sections

For disposal information, see Section 13. For Protective clothing and equipment, see Section 8.

## SECTION 7 - HANDLING AND STORAGE

### 7.1 Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

### 7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area.

#### Incompatibles

##### Proprietary Preservative:

Benzoyl chloride plus potassium hydroxide, bromine, carbon disulfide, chromyl chloride, copper, dibromalnonitrile, dimethyl sulfate, lead, barium carbonate, sulfuric acid, nitric acid.

##### Sodium Chloride:

No incompatibility data found.

##### Dipotassium Phosphate:

No incompatibility data found.

##### Polysorbate 20:

Strong oxidizers, acids.

### 7.3 Specific End Uses

Investigational research by professional users

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

### 8.1 Control Parameters

#### Component: Proprietary Preservative

ACGIH Threshold Limit Value (TLV): None established

OSHA Permissible Exposure Limit (PEL): None established

#### Component: Sodium Chloride

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): None established

#### Component: Dipotassium Phosphate

ACGIH Threshold Limit Value (TLV): 10 mg/m<sup>3</sup> total dust

OSHA Permissible Exposure Limit (PEL): 15 mg/m<sup>3</sup> total dust

#### Component: Polysorbate 20

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): None established

### 8.2 Exposure Controls

#### Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

### Respiratory Protection

Not expected to require personal respirator usage.

### Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

### Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

## SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Colorless liquid	b. Odor	None
c. Odor Threshold	N.A.	d. pH	7.4
e. Melting/Freezing Point (°C)	0	f. Boiling point (°C)	100
g. Flash Point (°C)	N.A.	h. Evaporation Rate	as water
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	as water	l. Vapor Density (Air = 1)	as water
m. Relative Density	as water	n. Water Solubility	soluble
o. Partition Coefficient n-octanol/water	Mixture	p. Autoignition Temperature (°C)	N.A.
q. Decomposition Temperature (°C)	N.A.	r. Viscosity	No data available.
s. Explosive Properties	N.A.	t. Oxidizing Properties	N.A.

## SECTION 10 - STABILITY AND REACTIVITY

### 10.1 Reactivity

### 10.2 Chemical Stability

Stable under normal conditions of use and storage.

### 10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

### 10.4 Conditions to Avoid

Don't store near acids.

### 10.5 Incompatible Materials

#### Proprietary Preservative:

Benzoyl chloride plus potassium hydroxide, bromine, carbon disulfide, chromyl chloride, copper, dibromalnonitrile, dimethyl sulfate, lead, barium carbonate, sulfuric acid, nitric acid.

#### Sodium Chloride:

No incompatibility data found.

#### Dipotassium Phosphate:

No incompatibility data found.

#### Polysorbate 20:

Strong oxidizers, acids.

### 10.6 Hazardous Decomposition Products

May form lead/copper azide in laboratory plumbing.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Product LD50 Values

#### Oral Rat LD50 (mg/kg)

27000

#### Dermal Rabbit LD50 (mg/kg)

20000

## Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Proprietary Preservative	No	No	None
Sodium Chloride	No	No	None
Dipotassium Phosphate	No	No	None
Polysorbate 20	No	No	none

## Potential Health Effects

### Inhalation

#### Proprietary Preservative

Contains 0.1% of a preservative that in concentrated form is highly toxic, causing irritation to the respiratory tract and mucous membranes, sore throat, coughing, dizziness, shortness of breath and fainting.

#### Sodium Chloride

May cause respiratory tract irritation.

#### Dipotassium Phosphate

Not expected to be a health hazard by inhalation.

#### Polysorbate 20

Not expected to be a health hazard by inhalation.

### Ingestion

#### Proprietary Preservative

Contains 0.1% of a preservative which if ingested in quantity may cause breathlessness, pulmonary edema and rapid heartbeat within 5 minutes. Nausea, vomiting, headache, restlessness, and diarrhea may occur within 15 minutes. Other symptoms may include low blood pressure, abnormal breathing, reduced body temperature, reduced body pH, convulsions, collapse and death.

#### Sodium Chloride

Ingestion of large amounts may cause gastrointestinal irritation. Ingestion of large amounts may cause nausea and vomiting, rigidity or convulsions. Continued exposure can produce a coma, dehydration and internal organ congestion.

#### Dipotassium Phosphate

Phosphates are slowly and incompletely absorbed when ingested, and seldom result in systematic effects. Some adverse health effects have occurred. The toxicity of phosphates is because of their ability to sequester calcium. Acute potassium intoxication by mouth is rare because large single doses usually induce vomiting and because in the absence of pre-existing kidney damage, potassium is rapidly excreted. Potassium poisoning can result in heart effects.

#### Polysorbate 20

Large doses may produce abdominal spasms, diarrhea.

### Skin

#### Proprietary Preservative

Contains 0.1% of a preservative which in concentration causes irritation, redness, and pain, may be absorbed through the skin with symptoms parallel to ingestion.

#### Sodium Chloride

May cause skin irritation.

#### Dipotassium Phosphate

No adverse effects expected.

#### Polysorbate 20

May cause irritation or sensitization in sensitive individuals.

### Eyes

#### Proprietary Preservative

Irritation, redness, pain and blurred vision.

#### Sodium Chloride

May cause eye irritation.

#### Dipotassium Phosphate

No adverse effects expected but may cause mechanical irritation.

#### Polysorbate 20

May cause irritation.

## **Carcinogenicity**

### **Proprietary Preservative**

No information found.

### **Sodium Chloride**

Not listed by ACGIH, IARC, NIOSH, NTP or OSHA.

### **Dipotassium Phosphate**

Not listed as a known or anticipated carcinogen by NTP or IARC.

### **Polysorbate 20**

Not listed as a known or anticipated carcinogen by NTP or IARC.

## **Mutagenicity**

### **Proprietary Preservative**

No information found.

### **Sodium Chloride**

See actual entry in RTECS for complete information.

### **Dipotassium Phosphate**

No information found.

### **Polysorbate 20**

No information found.

## **Reproductive Toxicity**

### **Proprietary Preservative**

No information found.

### **Sodium Chloride**

No data available.

### **Dipotassium Phosphate**

No information found.

### **Polysorbate 20**

No information found.

## **Teratogenic Effects**

### **Proprietary Preservative**

No information found.

### **Sodium Chloride**

No information found.

### **Dipotassium Phosphate**

No information found.

### **Polysorbate 20**

No information found.

## **Routes of Entry**

### **Proprietary Preservative**

Inhalation, ingestion, skin contact.

### **Sodium Chloride**

No information found.

### **Dipotassium Phosphate**

No information found.

### **Polysorbate 20**

No information found.

## **Target Organ Statement**

### **Proprietary Preservative**

Sodium azide may affect the nervous system, kidneys, and cardiovascular system.

### **Sodium Chloride**

No information found.

**Dipotassium Phosphate**

Persons with impaired kidney function may be more susceptible to the effects of the substance.

**Polysorbate 20**

No information found.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

**COMPONENT: Proprietary Preservative**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

**COMPONENT: Sodium Chloride**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hrs, bluegill) 5480 mg/L	LC50 (48 hr, daphnia) 874mg/L	LC50 (120hrs) 2430 mg/L	No data

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	LD50 (house sparrow) 3500mg/kg	No data	IC50 (7 days) 500-1950mg/kg soil	No data

**COMPONENT: Dipotassium Phosphate**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hr trout) >100mg/l	EC50 (48hr, daphnia) >100mg/l	EC50 > 100mg/l	EC50 >1000mg/l

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

**COMPONENT: Polysorbate 20**

	<b>Vertebrates</b>	<b>Invertebrates</b>	<b>Algae</b>	<b>Microorganisms</b>
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

	<b>Birds</b>	<b>Arthropods</b>	<b>Plants</b>	<b>Microorganisms</b>
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

### 12.2 Persistence and Degradability

**Proprietary Preservative**

No data

**Sodium Chloride**

No data

**Dipotassium Phosphate**

No data

**Polysorbate 20**

No data

### 12.3 Bioaccumulative Potential

**Proprietary Preservative**

No data

**Sodium Chloride**

No data

**Dipotassium Phosphate**

No data

Polysorbate 20  
No data

#### 12.4 Mobility in Soil

Proprietary Preservative  
No data

Sodium Chloride  
No data

Dipotassium Phosphate  
No data

Polysorbate 20  
No data

#### 12.5 Results of PBT and vPvB Assessment

Proprietary Preservative  
No data

Sodium Chloride  
Not PBT or vPvB

Dipotassium Phosphate  
No data

Polysorbate 20  
No data

#### 12.6 Other Adverse Effects

Proprietary Preservative  
None

Sodium Chloride  
None

Dipotassium Phosphate  
None

Polysorbate 20  
None

### SECTION 13 - DISPOSAL CONSIDERATIONS

#### 13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

### SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	N.A.	Not regulated	Not regulated	Not regulated
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

### SECTION 15 - REGULATORY INFORMATION

#### 15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture United States

##### TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

##### SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Proprietary Preservative	Yes	No	Yes	Yes	Yes
Sodium Chloride	No	No	No	Yes	No
Dipotassium Phosphate	No	No	No	Yes	Yes



Polysorbate 20

No

No

No

Yes

No

## Europe

### EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

## SECTION 16 - OTHER INFORMATION

### Revisional Updates

5/29/2015 - Updated Sections 2.1 and 3.2

4/16/2013 - Released Version 1.0

### NFPA Codes

Health N.A. Flammability N.A. Reactivity N.A.

### Dangers

#### Proprietary Preservative

H300 - Fatal if swallowed.

H400 - Very toxic to aquatic life.

H410 - Very toxic to aquatic life with long lasting effects.

#### Sodium Chloride

None

#### Dipotassium Phosphate

None

#### Polysorbate 20

None

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