

Safety Data Sheet



Revision Date: 6/30/2014

SDS #: SDS-10303-01

BluePhos® Microwell Phosphatase Substrate

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:

BluePhos® Microwell Phosphatase Substrate

Product Code

50-88-02

Kit Components:

BluePhos® Phosphatase Substrate Solution A 50-88-03

BluePhos® Phosphatase Substrate Solution B 50-88-04

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755

Fax #: 1-301-948-0169

Web: www.kpl.com

Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER

Telephone: 13 11 26

Hours: 24 hours

CANADIAN TRANSPORT EMERGENCY CENTER

Telephone: (1) 613 996 6666

Hours: 24 hours/day, 7 days/week

UK – THE NATIONAL FOCUS

Telephone: (44) 029 2041 6388

Hours: 09:00-17:00 GMT

USA- NATIONAL RESPONSE CENTER

Telephone: (1) 800 424 8802

Hours: 24 hours/day, 7 days/week

CHEMTREC:

CHEMTREC Customer Number:- CCN12505*

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident

Call CHEMTREC Day or Night

Within USA and Canada: 1-800-424-9300 CCN12505 or

+1 703-527-3887 (collect calls accepted)

Safety Data Sheet



Revision Date: 6/30/2014

MSDS #: 10304

Phosphatase Substrate Solution A

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:	Product Code
Phosphatase Substrate Solution A	50-88-13
Phosphatase Substrate Solution A	50-88-11
Phosphatase Substrate Solution A	50-88-09
Phosphatase Substrate Solution A	50-88-07
Phosphatase Substrate Solution A	50-88-05
Phosphatase Substrate Solution A	50-88-03

Hazardous Reagent
PHOSPHATASE SUBSTRATE SOLUTION

Hazardous Reagent Product code
Catalog No. listed above

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
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Gaithersburg, Maryland 20878
USA

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2. HAZARD IDENTIFICATION

Hazard Type Causes Skin Irritation; Causes Eye Irritation; Harmful to Aquatic life with long lasting effects.

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Classification Eye Irrit. 2
Skin Irrit. 2
Aquatic Chronic 3

Hazard Statement H319: Causes serious eye irritation
H315: Causes skin irritation
H412: Harmful to aquatic life with long lasting effects

Precautionary Statement P264: Wash skin thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273: Avoid release to the environment.



Data for 100% Hazardous Chemical

ROUTES OF EXPOSURE:	The substance can be absorbed into the body by inhalation and by ingestion.
INHALATION RISK:	No indication can be given about the rate in which a harmful concentration in the air is reached on evaporation of this substance at 20°C.
SHORT-TERM EXPOSURE	The substance is corrosive to the eyes. The substance is severely irritating to the skin . The aerosol is irritating to the respiratory tract .
LONG-TERM EXPOSURE:	The substance may have effects on the liver when ingested.

The product is a Mixture. It May Cause the following symptoms.

EYES: Redness. Pain. Severe deep burns.

SKIN: Redness. Pain.

INHALATION: Cough. Sore throat.

INGESTION: Abdominal pain. Burning sensation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
Phosphatase Substrate Solution A	2-Amino-2-Methyl-1-Propanol, (AMP)	4%	124-68-5

Classification

Eye Irrit. 2
Skin Irrit. 2
Aquatic Chronic 3

4. FIRST AID MEASURES

Data for 100% Hazardous Chemical

Ingestion First Aid:	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention.
Inhalation First Aid:	Fresh air, rest. Refer for medical attention.
Skin First Aid:	Remove contaminated clothes. Rinse skin with plenty of water or shower.
Eye First Aid:	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

5. FIRE FIGHTING MEASURES

Data For 100% Hazardous Chemical

<u>Fire Acute Hazard:</u>	<u>Fire Prevention:</u>	<u>Fire Fighting:</u>
Combustible. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames.	Powder, alcohol-resistant foam, water spray, carbon dioxide.
<u>Explosion Acute Hazard:</u>	Above 67°C use a closed system, ventilation.	Not Available
Above 67°C explosive vapour/air mixtures may be formed.		

CHEMICAL DANGERS: The substance decomposes on burning producing toxic fumes including nitrogen oxides . The solution in water is a medium strong base. Reacts with strong acids , strong oxidants .

PHYSICAL DANGERS: Not Available

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. 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. Should not be released into the environment.
Method of Containment	Absorb any spilt liquid with an absorbent (e.g. diatomite, vermiculite, sand) and dispose of according to regulations. Afterwards ventilate area and wash spill site.
Methods of Clean-up	Clean-up with copious amounts of water.
Other Information	Wear respiratory protection, eye protection, hand protection and body protection

Data for 100% Hazardous Chemical

SPILLAGE DISPOSAL Sweep spilled substance into covered containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place. (Extra personal protection: A/P2 filter respirator for organic vapour and harmful dust.)

7. HANDLING AND STORAGE

Handling:	Avoid any contact when handling the substance. Prevent seepage into flooring. Take care to maintain clean working place. Do not leave container open. Fill only into labelled container.
Storage:	Containers have to be labelled clearly and permanently. Keep container tightly closed. Recommended storage at 2-8.

Data for 100% Hazardous Chemical

STORAGE Separated from strong oxidants, strong acids.

8. EXPOSURE CONTROL

Data for 100% Hazardous Chemical

• INHALATION	Local exhaust or breathing protection.
• EYES	Safety goggles, or eye protection in combination with breathing protection if powder.
• SKIN	Protective gloves.
• INGESTION	Do not eat, drink, or smoke during work.

Engineering Controls

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear Light Blue Solution	
Physical State	Liquid	pH: 9.7 - 10

Data for 100% Hazardous Chemical

Boiling point: °C	Melting point: 31°C	Density: 0.93	g/cm ³	Solubility in water:	miscible
Relative vapour density (air = 1): 3.0	Flash point:	67°C c.c.		Vapour pressure, Pa at 20°C:	133

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions
Incompatibility Materials to Avoid	Not Available
Hazardous Decomposition Products	May produce toxic fumes including nitrogen oxides.
Hazardous Polymerization	Will not polymerize

Data for 100% Hazardous Chemical

CHEMICAL DANGERS:	The substance decomposes on burning producing toxic fumes including nitrogen oxides . The solution in water is a medium strong base. Reacts with strong acids , strong oxidants .
PHYSICAL DANGERS:	Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral	LD50 oral rat Value: 2900 mg/kg Reference: Journal of the American College of Toxicology. Vol. 9(2), Pg. 203, 1990.
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LD50 Dermal Not Available

LC50 Inhalation Not Available

Chronic Toxicity

Carcinogenicity	Not Available
Irritation	Irritating to eyes, nose and throat.
Corrosivity	Not Available
Sensitization	Not Available
Neurological Effects	Not Available
Mutagenic Effects	Not Available
Reproductive Effects	Not Available
Developmental Effects	Not Available
Target Organ Effects	Eyes, Skin and Liver
Other adverse effects	Not Available

12. ECOLOGICAL MEASURES

Ecotoxicity	Data for 2-amino-2-methylpropanol: Harmful to aquatic life with long lasting effects.
Persistence/Degradability	Not Available
Mobility in Environmental Media	Not Available
Bioaccumulation/Accumulation	Not Available

13. DISPOSAL MEASURES

Waste Disposal Method:	Avoid escape into water, drainage, sewer, or the ground. If there is no way of recycling it must be disposed of in compliance with the respective national and local regulations.
Contaminated Packaging:	Avoid contact with skin and clothing. Place contaminated packaging in a break proof outer vessel and dispose on in compliance with national and local regulations.

US EPA Waste Number: Not Available

14. TRANSPORTATION MEASURES

DOT: Not Regulated
 IATA: Not Regulated
 ADR (road)/ RID (rail): Not Regulated
 IMDG (sea): Not Regulated

General Transport Regulations Not Available

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 g 2.C1.

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

Not Listed

State Regulations

California Proposition 65:

This product contains the following Proposition 65 chemicals: None Listed

State Right to Know Act

Chemical Name	2-Amino-2-Methyl-1-Propanol, (AMP)
Massachusetts	Listed
New Jersey	Listed
Pennsylvania	Listed
New York	Not Listed
Rhode Island	Not Listed

International Inventories

Chemical Name	2-Amino-2-Methyl-1-Propanol, (AMP)
TSCA	Listed
DSL	Listed
NDSL	Not Listed
EINECS	Listed
CHINA	Listed
KECL	Listed
JAPAN:	Listed
AICS	Listed

EU Regulations

Annex I Index#	603-070-00-6
Classification	Eye Irrit. 2 Skin Irrit. 2 Aquatic Chronic 3
Risk Phrases	H319: Causes serious eye irritation H315: Causes skin irritation H412: Harmful to aquatic life with long lasting effects

Safety Phrases

P264: Wash skin thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
P273: Avoid release to the environment.

Symbols and Indications of Danger

GHS07
Warning

Specific Concentration Limits

DSD Classification: C ≥ 10 % Xi; R36/38 : Irritating to Eyes and Skin

Export and Import

This substance is not listed in the Annex I of Regulation (EC) No 649/2012.

European Priority List

This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).

16. OTHER INFORMATION

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. KPL shall not be held liable for any damage resulting from handling or from contact with the above product. Users should make their own investigations to determine the suitability of the information for their particular purposes. This material is sold for research purposes and is intended as laboratory reagents only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals.

Revision Date: 6/30/2014

Safety Data Sheet



Revision Date: 7/31/2014

BluePhos® Phosphatase Substrate Solution B

SDS #: SDS-10305-01

1. PRODUCT AND COMPANY IDENTIFICATION

Product Description:	Product Code
BluePhos® Phosphatase Substrate Solution B	50-88-14
BluePhos® Phosphatase Substrate Solution B	50-88-12
BluePhos® Phosphatase Substrate Solution B	50-88-10
BluePhos® Phosphatase Substrate Solution B	50-88-08
BluePhos® Phosphatase Substrate Solution B	50-88-06
BluePhos® Phosphatase Substrate Solution B	50-88-04

Hazardous Reagent

None

Hazardous Reagent Product code

None

Recommended Use Reagent

Contact Manufacturer KPL, Inc.
910 Clopper Road
Gaithersburg, Maryland 20878
USA

Phone #: 1-301-948-7755
Fax #: 1-301-948-0169
Web: www.kpl.com
Email: kplmsds@seracare.com

Emergency Telephone Numbers:

AUSTRALIA – POISONS INFORMATION CENTER	Telephone: 13 11 26	Hours: 24 hours
CANADIAN TRANSPORT EMERGENCY CENTER	Telephone: (1) 613 996 6666	Hours: 24 hours/day, 7 days/week
UK – THE NATIONAL FOCUS	Telephone: (44) 029 2041 6388	Hours: 09:00-17:00 GMT
USA- NATIONAL RESPONSE CENTER	Telephone: (1) 800 424 8802	Hours: 24 hours/day, 7 days/week

CHEMTREC: CHEMTREC Customer Number:- CCN12505*
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
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+1 703-527-3887 (collect calls accepted)

2. HAZARD IDENTIFICATION

Hazard Type	GHS Classification in accordance with 29 CFR 1910 (OSHA HCS): The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment.
Principle Route of Exposure	Not Available
Acute Effects: Eye:	May cause redness and irritation
Acute Effects: Skin:	Dry skin and Irritation may occur
Acute Effects: Inhalation:	May be harmful if inhaled in very large quantities.

SDS #: SDS-10305-01

Acute Effects: Ingestion: May be harmful if swallowed.**Chronic Effects:** Not Available**Additional Information** The product contains no substances which at their given concentration, are considered to be hazardous to health

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CHEMICAL</u>	<u>% Weight</u>	<u>CAS #:</u>
BluePhos® Phosphatase Substrate Solution B	Not Applicable	Not Applicable	Not Applicable

GHS Classification Not Applicable:
 The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per:
 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
 Regulation (EC) No 1272/2008

4. FIRST AID MEASURES

General Advice Wash contaminated clothing before reuse. Consult a physician if irritation persists.

Oral Exposure Rinse mouth. Refer for medical attention.

Inhalation Exposure Remove subject to fresh air. Seek medical attention if necessary.

Skin Exposure Rinse with copious amounts of water

Eye Exposure First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.

5. FIRE FIGHTING MEASURES

Extinguishing media Use extinguishing media appropriate for surrounding fire.

Unusual Fire and Explosive Hazards Not Available

Flash Point Not Available

Autoignition Temperature Not Available

Flammability Statement Not Available

Specific hazards arising from the chemical Not Available

Protective equipment and precautions for firefighters In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Avoid contact with skin, eyes and clothing.

Environmental Precautions No special environmental precautions required. Should not be released into the environment.

Method of Containment Contain spill and then clean-up with copious amounts of water.

Methods of Clean-up Clean up of spills requires no special equipment or procedures. Clean with copious amounts of water.

SDS #: SDS-10305-01

Other Information Not Available

7. HANDLING AND STORAGE

Handling: Wear appropriate PPE. Refer to section 8.

Storage: Store at 2 – 8°C.

8. EXPOSURE CONTROL

Respiratory Protection Ventilation, local exhaust, or breathing protection.

Eye Protection Safety goggles.

Skin Protection Protective gloves. Protective clothing.

Ingestion Do not eat, drink, or smoke during work.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow Solution
Physical State	Liquid
Odor	Not Available
Odor Threshold	Not Available
pH	Not Available
Boiling Point	Not Available
Evaporation Rate	Not Available
Vapor Density	Not Available
Vapor Pressure	Not Available
Relative Density	Not Available
Auto-Ignition Temperature	Not Available
Water Solubility	Dilutable
Flammability	Not Available
Flash Point	Not Available
Viscosity	Not Available
Oxidizing Properties	Not Available
Explosive Properties	Not Available
Additional Parameters	See Datasheet for other Product Information.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions
Conditions to avoid	Not Available
Incompatibility Materials to Avoid	Not Available
Hazardous Decomposition Products	Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides, Sulphur Oxides, Hydrogen Chloride gas.
Hazardous Polymerization	Will not occur
Possibility of hazardous reactions	Not Available

11. TOXICOLOGY MEASURES

Acute Toxicity

SDS #: SDS-10305-01

The toxicological risks are minor due to the low concentration of hazardous ingredients. The following toxicological information is for the hazardous ingredient in pure form.

LD50 Oral	No Data Available
LD50 Dermal	No Data Available
LC50 Inhalation	No Data Available

Chronic Toxicity

Carcinogenicity	There are no known carcinogenic chemicals in this product.
Irritation	No Data Available
Corrosivity	No Data Available
Sensitization	No Data Available
Neurological Effects	No Data Available
Mutagenic Effects	No Data Available
Reproductive Effects	No Data Available
Developmental Effects	No Data Available
Target Organ Effects	No Data Available
Other adverse effects	Not Available

12. ECOLOGICAL MEASURES

Ecotoxicity	Not Available
Persistence/Degradability	Not Available
Mobility in Environmental Media	Not Available
Bioaccumulation/Accumulation	Not Available

13. DISPOSAL MEASURES

Waste Disposal Method:	Observe all Federal, State and Local laws concerning health and pollution.
Contaminated Packaging:	Avoid contact with skin and clothing. Dispose of in compliance with the respective national and local regulations.
US EPA Waste Number:	Not Available

14. TRANSPORTATION MEASURES

DOT:	Not Available
IATA:	Not Available
ADR (road)/ RID (rail):	Not Available
IMDG (sea):	Not Available
General Transport Regulations	Not Available

15. REGULATORY MEASURES

This product is a mixture that may contain one or more hazardous chemicals. The hazardous ingredients listed are only those as required by 29 CFR 1910.1200 (OSHA HCS).

SDS #: SDS-10305-01

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (See 40 CFR 61)

This product contains no chemicals which are subject to the reporting requirements of the Clean Air Act.

State Regulations**California Proposition 65:**

This product contains the following Proposition 65 chemicals: Not Listed

State Right to Know Act

Chemical Name	Not Applicable
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Massachusetts	Not Applicable
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New Jersey	Not Applicable
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Pennsylvania	Not Applicable
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New York	Not Applicable
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Rhode Island	Not Applicable
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International Inventories

Chemical Name	Not Applicable
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TSCA	Not Applicable
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DSL	Not Applicable
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NDSL	Not Applicable
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EINECS	Not Applicable
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CHINA	Not Applicable
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KECL	Not Applicable
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JAPAN:	Not Applicable
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AICS	Not Applicable
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EU Regulations

Annex I Index#	Not Applicable
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Classification	Not Applicable: The product contains no substances which at their given concentration, are considered to be hazardous to health or the environment as per: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Regulation (EC) No 1272/2008
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Risk Phrases	Not Applicable
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Safety Phrases	Not Applicable
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Symbols and Indications of Danger	Not Applicable
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Specific Concentration Limits	Not Applicable
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Export and Import	This substance is not listed in the Annex I of Regulation (EC) No 649/2012.
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European Priority List	This substance is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of existing substances.).
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Revision Date: 7/31/2014