SAFETY DATA SHEET

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

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

1.1 Product Identifier

Product Name: Diogenes Activator **Product Number:** CL-202B

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
National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

Agent
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

Phosphate buffer containing additional proprietary electrolyte blend

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Sodium/Potassium Phosphate Buffer	80-90	7778-78-0	231-913-4	N.A.
Proprietary Electrolyte	10-20			N.A.

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion

If swallowed, give several glasses of water to drink to dilute. If large amounts were swallowed or symptoms occur, get medical advice. Never give anything by mouth to an unconscious person.

Skin

Wash exposed area with soap and water. Get medical advice if irritation develops.

Eyes

Wash thoroughly with running water. Get medical advice if irritation develops.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation

Sodium/Potassium Phosphate Buffer:

Not expected to be a health hazard by inhalation.

Proprietary Electrolyte:
No data

Ingestion

Sodium/Potassium Phosphate Buffer:
Symptoms may include vomiting, lethargy, diarrhea, blood chemistry effects, cardiac effects and central nervous system effects.

Proprietary Electrolyte:
No data

Skin

Sodium/Potassium Phosphate Buffer:
No adverse effects expected.

Proprietary Electrolyte:
No data

Eyes

Sodium/Potassium Phosphate Buffer:
Pain and redness.

Proprietary Electrolyte:
No data

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed
Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES
5.1 Extinguishing media
Use media appropriate to the primary cause of fire.

5.2 Special Hazards Arising from the Substance/Mixture
Hazardous Combustion Products
N.A.

Hazardous Decomposition Products
Phosphorus oxides may form when heated to decomposition.

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

5.3 Advice 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.

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

Sodium/Potassium Phosphate Buffer:
No incompatibility data found.

Proprietary Electrolyte:
No incompatibility data found.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

Component: Sodium/Potassium Phosphate Buffer

ACGIH Threshold Limit Value (TLV): 10 mg/m3 total dust
OSHA Permissable Exposure Limit (PEL): 15 mg/m3 total dust

Component: Proprietary Electrolyte

ACGIH Threshold Limit Value (TLV): none established
OSHA Permissable 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

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

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 protective gloves and clean body covering clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Crystalline solid	**b. Odor**	None
c. Odor Threshold	N.A.	**d. pH**	N.A.
e. Melting/Freezing Point (^{o}C)	N.A.	**f. Boiling point (^{o}C)**	N.A.
g. Flash Point (^{o}C)	N.A.	**h. Evaporation Rate**	N.A.
i. Flammability	N.A.	**j. Upper/Lower Flammability or Explosive Limits**	N.A.
k. Vapor Pressure	N.A.	**l. Vapor Density (Air = 1)**	N.A.
m. Relative Density	1.0	**n. Water Solubility**	Soluble
o. Partition Coefficient n-octanol/water	Mixture	**p. Autoignition Temperature (^{o}C)**	N.A.
q. Decomposition Temperature (^{o}C)	N.A.	**r. Viscosity**	No data available.
s. Explosive Properties	N.A.	**t. Oxidizing Properties**	Not an oxidizer

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive under normal conditions of use.

10.2 Chemical Stability

Stable under recommended 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
No information found.

10.5 Incompatible Materials
Sodium/Potassium Phosphate Buffer:
No incompatibility data found.

Proprietary Electrolyte:
No incompatibility data found.

10.6 Hazardous Decomposition Products
Phosphorus oxides may form when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION
Product LD50 Values
Oral Rat LD50 (mg/kg)
No data

Dermal Rabbit LD50 (mg/kg)
No data

Component Cancer List Status

	NTP Carcinogen		
	Known	Anticipated	IARC Category
Sodium/Potassium Phosphate Buffer	No	No	None
Proprietary Electrolyte	No data	N.A.	No data

Potential Health Effects
Inhalation
Sodium/Potassium Phosphate Buffer
Not expected to be a health hazard by inhalation.

Proprietary Electrolyte
No data

Ingestion
Sodium/Potassium Phosphate Buffer
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.

Proprietary Electrolyte
No data

Skin
Sodium/Potassium Phosphate Buffer
No adverse effects expected.

Proprietary Electrolyte
No data

Eyes
Sodium/Potassium Phosphate Buffer
No adverse effects expected but may cause mechanical irritation.

Proprietary Electrolyte
No data

Carcinogenicity
Sodium/Potassium Phosphate Buffer
Not listed as a known or anticipated carcinogen by NTP or IARC.

Proprietary Electrolyte
No information available

Mutagenicity

Sodium/Potassium Phosphate Buffer
No information found.

Proprietary Electrolyte
No information available

Reproductive Toxicity

Sodium/Potassium Phosphate Buffer
No information found.

Proprietary Electrolyte
No information available

Teratogenic Effects

Sodium/Potassium Phosphate Buffer
No information found.

Proprietary Electrolyte
No information available

Routes of Entry

Sodium/Potassium Phosphate Buffer
No information found.

Proprietary Electrolyte
No information available

Target Organ Statement

Sodium/Potassium Phosphate Buffer
Persons with impaired kidney function may be more susceptible to the effects of the substance.

Proprietary Electrolyte
No information available

SECTION 12 - ECOLOGICAL INFOMATION

12.1 Toxicity

COMPONENT: Sodium/Potassium Phosphate Buffer

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96 hr, trout) >100mg/l	No data	NOEC (72hr) >100mg/l	NOEC (72 hrs) >1000mg/l

	Birds	Arthropods	Plants	Microorganisms
Terrestial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

COMPONENT: Proprietary Electrolyte

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hr bluegill) 5840mg/l	EC50 (daphnia, 48 hr) 874mg/l	EC50 2430 mg/L	NOEC 5000-8000mg/l

	Birds	Arthropods	Plants	Microorganisms
Terrestial Environment Toxicity (ppm unless otherwise noted)	LD50 (sparrow, 72hr) 3,000  3,500 mg/kg	NOEC (earthworm, 10wk) 60mM	IC50 (germination, 7days) 500-1890mg/kg soil	No data

12.2 Persistence and Degradability

Sodium/Potassium Phosphate Buffer
No data

Proprietary Electrolyte
No data

12.3 Bioaccumulative Potential

Sodium/Potassium Phosphate Buffer
No data

Proprietary Electrolyte
No data

12.4 Mobility in Soil

Sodium/Potassium Phosphate Buffer
No data

Proprietary Electrolyte
No data

12.5 Results of PBT and vPvB Assessment

Sodium/Potassium Phosphate Buffer
does not apply

Proprietary Electrolyte
not PBT / vPvB

12.6 Other Adverse Effects

Sodium/Potassium Phosphate Buffer
None

Proprietary Electrolyte
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
Sodium/Potassium Phosphate Buffer	No	No	No	Yes	No
Proprietary Electrolyte	No	No	No	No	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
9/27/2013 - Released Version 1.0

NFPA Codes

Health 1 **Flammability** 0 **Reactivity** 0

Dangers

Sodium/Potassium Phosphate Buffer
None

Proprietary Electrolyte
None

intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.