

SAFETY DATA SHEET

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

1.1 Product Identifier

Product Name: Nuclistain

Product Number: EC-730

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

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

H302 - Acute Toxicity-Oral (Category 4)

2.2 Label Elements

GHS LABEL ELEMENTS AND CLASSIFICATION

GHS Label Elements



WARNING

H302 - Harmful if swallowed
P264 - Wash skin thoroughly after handling.
P301+P312 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician IF you feel unwell.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Names/Description

Aqueous solution of quinone-imine dye.

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
METHYLENE BLUE	< 3	61-73-4	200-515-2	H302

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

Causes respiratory tract irritation.

Ingestion

Nausea, vomiting, diarrhea, and gastritis.

Skin

Causes skin irritation.

Eyes

Causes eye irritation and possible injury.

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

May produce oxides of nitrogen, sulfur, and carbon when heated to decomposition.

Hazardous Decomposition Products

May produce oxides of nitrogen, sulfur, and carbon when heated to decomposition.

Hazardous Polymerization

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

Floor may be slippery. Use care to avoid falling. Transfer spilled material to suitable container for recovery or disposal.

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. 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

Strong oxidizing agents, alkali, dichromates, alkali iodides, reducing agents.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit (PEL): none established

8.2 Exposure Controls

Engineering Controls

In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Respiratory Protection

Not expected to require personal respirator usage.

Eye Protection

Safety glasses.

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	Opaque blue liquid	b. Odor	None
c. Odor Threshold	N.A.	d. pH	7.0
e. Melting/Freezing Point (°C)	0	f. Boiling point (°C)	100
g. Flash Point (°C)	N.A.	h. Evaporation Rate	1.0 (H ₂ O = 1)
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	water	l. Vapor Density (Air = 1)	0.5
m. Relative Density	1.0	n. Water Solubility	soluble
o. Partition Coefficient n-octanol/water	Aqueous solution	p. Autoignition Temperature (°C)	N.A.
q. Decomposition Temperature (°C)	N.A.	r. Viscosity	No data available.
s. Explosive Properties	N	t. Oxidizing Properties	Not an oxidizer

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive under recommended conditions of use and storage.

10.2 Chemical Stability

Stable under ordinary 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

Incompatibles.

10.5 Incompatible Materials

Strong oxidizing agents, alkali, dichromates, alkali iodides, reducing agents.

10.6 Hazardous Decomposition Products

May produce oxides of nitrogen, sulfur, and carbon when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD50 Values

Oral Rat LD50 (mg/kg)

> 5 g/kg

Dermal Rabbit LD50 (mg/kg)

No Data

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
METHYLENE BLUE	No	No	None

Potential Health Effects

Inhalation

May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea, and death. Can produce delayed pulmonary edema.

Ingestion

A burning sensation of the mouth may be noted following ingestion. May cause nausea, vomiting, diarrhea, and gastritis.

Skin

Absorption into the body may cause cyanosis. May color the skin a bluish color. May cause photosensitization.

Eyes

May cause chemical conjunctivitis.

Carcinogenicity

Not listed as a known or possible carcinogen by ACGIH, NIOSH, OSHA, NTP or IARC.

Mutagenicity

DNA Adduct: Mouse, Ascites tumor = 70 umol/L.; DNA Adduct: Mammal - species unspecified Lymphocyte = 1830 nmol/L.

Reproductive Toxicity

Oral, rat: TDLo = 2500 mg/kg (femal 1-22 day (s) after conception) Fertility - post - implantation mortality

Teratogenic Effects

No information found.

Routes of Entry

Ingestion, inhalation, skin contact.

Target Organ Statement

Acute or chronic overexposure to this material or its components may cause adverse effects to the following: lungs, thorax, or blood.

SECTION 12 - ECOLOGICAL INFOMATION

12.1 Toxicity

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

12.2 Persistence and Degradability

No data

12.3 Bioaccumulative Potential

No data

12.4 Mobility in Soil

No data

12.5 Results of PBT and vPvB Assessment

No data

12.6 Other Adverse Effects

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	Not Regulated	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
METHYLENE BLUE	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

10/25/2013 - Released Version 1.0

NFPA Codes

Health 2 Flammability 0 Reactivity 0

Dangers

METHYLENE BLUE

H302 - Harmful if swallowed

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is 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.