

407 New Sanford Road La Vergne, TN 37086

SDS DATE: 07/22/2014

Pro Advantage™ Fecal Occult Blood Test Developer

Item #'s:

P080018 Fecal Occult Blood Lab Pack - Guaiac Slides

P080028 Fecal Occult Developer Solution - For Guaiac Slides

Complies with 91/155/EEC, 1907/2006 (REACH) and amendments, OSHA's Hazard Communication Standard, 29 CFR 1910.1200; and the requirements of the U.S. Department of Labor Occupational Safety & Health Administration.

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: Pro Advantage™ Fecal Occult Blood Test Developer Solution **PRODUCT USE:** For In Vitro Diagnostic Use. See product literature for details.

National Distribution & Contracting, Inc.

407 New Sanford Road La Vergne, TN 37086 Telephone: (800) 774-9110

Website: www.ProAdvantagebyNDC.com

SECTION 2: COMPOSITION

MANUFACTURER:

	% wt	IUPAC	SYNONYMS	MOLECULAR FORMULA	IDEN	TIFIERS
Water	<20 %	Oxidane	Hydrogen oxide, Dihydrogen monoxide, Hydrogen monoxide, Dihydrogen oxide & Hydrogen hydroxide	H₂O	CAS PUBCHEM EC UN RTEC	7732-18-5 962 231-791-2 N/A ZC0110000
Hydrogen Peroxide IMIS: 1470	<5 %	Dihydrogen Dioxide	Dioxidane	H ₂ O ₂ (IARC) carcinogenic classification: Group 3-not classifiable as to its carcinogenicity to humans.	CAS PUBCHEM EC UN RTEC	7722-84-1 784 231-765-0 2984 ¹ MX0887000
Ethyl Alcohol IMIS: 1060	>50 %	Ethanol	Ethyl alcohol, Ethyl hydrate, Ethyl hydroxide, Ethylic alcohol, Ethylol, Hydroxyethane, Methyl Carbinol	C ₂ H ₆ O (IARC) carcinogenic classification: Group 3-not classifiable as to its carcinogenicity to humans.	CAS PUBCHEM EC UN RTEC	64-17-5 702 200-578-6 1170 KQ6300000

SECTION 3: HAZARDOUS INGREDIENTS

		OSHA PEL	ACGIH TLV	DFG MAK	NIOSH	Classification: 19 EEC	99/45/EC & 67/548
						Labeling	R & S Phrases
Hydrogen Perox	ide (stabilized)	<u>-</u> .			1 ppm; 1.4		R8; R34. ²
EU Index: EU Classification:	008-003-00-9 Oxidant (O) Corrosive (C)	1 ppm TWA; 1.4 mg/m ³	1 ppm TWA	1 ppm, 1.4 mg/m ³	mg/m³ TWA (IDLH): 75 ppm	OXIOZER 5.1	S3; S26; S28; S36/37/39; S45. ³
Ethanol		1000 ppm			1000 ppm;		
EU Index:	603-002-00-5	TWA;	1000 ppm; 1880 mg/m ³	500 ppm,	1900 mg/m ³ TWA		R11; R20/21/22.5
EU Classification:	Highly Flammable	1900 mg/m ³ TWA	TWA ⁴	960 mg/m³	(IDLH): 3,300 ppm [LEL]		S16; S36/37.6

SECTION 4: FIRST AID MEASURES

EYES:

If product is splashed in eyes, wash eyes under gently running water for 15 minutes or longer, making sure that the eyelids are held open. Obtain medical attention.

¹ 8-20% soln.

² R8 Contact with combustible material may cause fire; R34 Causes burns.

³ S3 Keep in a cool place; S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice; S28 After contact with skin, wash immediately with plenty of water; S36/37/39 Wear suitable protective clothing, gloves and eye/face protection; S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

⁴ American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV); Appendix A4 - Not Classifiable as a Human Carcinogen (Listed under Ethanol)

⁵ R11 Highly Flammable; R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

⁶ S16 Keep away from sources of ignition – No Smoking; S36/37 Wear suitable protective clothing and gloves.



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SKIN: Flush contact area with cold water. Wash effected area with soap and water ... rinse thoroughly. Skin

that has been bleached white will return to normal color within a few hours. If irritation persists, contact a

physician.

INGESTION: If fully conscious, lucid and not convulsing, victim should drink as much water as possible. Contact a physician or

poison control center immediately. Do not induce vomiting unless instructed to do so by a certified medical

authority.

INHALATION: Move victim into fresh air, If breathing is labored or victim loses consciousness contact a physician immediately,

If breathing stops, administer artificial respiration; use oxygen as required. Contact a physician immediately.

SECTION 5: FIRE & EXPLOSION HAZARD DATA

FLASH POINT: Pro Advantage™ Fecal Occult Blood Test Developer: 21 °C (69.8 °F)

Ethyl Alcohol 56 °F (13 °C) Tag Closed Cup

60 °F (16 °C) Tag Open Cup

Peroxide Not Combustible

Water N/A

AUTOIGNITION TEMPERATURE: N/A

HAZARD CLASSIFICATION:

HEALTH: 17 FLAMMABILITY8: 29 REACTIVITY: 110 SPECIAL OX

EXTINGUISHING MEDIA: Use water, carbon dioxide, dry chemicals or universal-type foams applied as per

manufacturer's recommendations.

SPECIAL FIRE FIGHTING PROCEDURES: Wear protective clothing. Use self-contained breathing apparatus

(NIOSH Certified). Do not use oxidizable sorbents. Vapors form explosive mixtures with air. Vapors are heavier than air; fire may

flash from ignition source back along vapor trail.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Oxygen evolution from decomposition of hydrogen peroxide will support

combustion and may serve to intensify a fire. (Hydrogen Peroxide

concentration is nominal)

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

If material is released or spilled, wear all appropriate protective equipment described in Section 8 before cleaning up the spill or handling contaminated material. Wipe up the spill and dispose of the contaminated material. Avoid creating aerosols or dust while cleaning up a spill.

After the material has been picked up and contained in a bag, wash the spill site with distilled or deionized water.

Spill and Leak Procedures Absorb spilled material with an appropriate inert, non-flammable absorbent and

dispose according to local regulations.

Environmental Precautions Contain spill to prevent migration.

SECTION 7: HANDLING & STORAGE

HANDLING & STORAGE: Store at room temperature (15°-30°C or 59°-86°F).

OTHER PRECAUTIONS: For in vitro diagnostic use Do not substitute

For in vitro diagnostic use. Do not substitute reagents from kits from other manufacturers. You may interchange slides & reagent from Pro Advantage™ Fecal Occult Blood Test kits as long as they are within the expiration date; except with the "Easy Readability" Product line. Patient specimens and all materials coming into contact with them should be handled as if capable of transmitting infections and disposed of with proper precautions. Replace bottle closure when Pro Advantage™ Fecal Occult Developer Solution is not being used. This will diminish alcohol vapors and reduce the risk of developer contamination. To maintain efficacy, store according to the instructions in the product labeling.

⁷ Exposure would cause irritation with only minor residual injury (e.g., acetone)

⁸ Flammability depends on the ratio of water and ethanol. The very *common* 95% aqueous ethanol has a flash point of 55°F.

M. Hristova, D. Damgaliev, D. Popova; Estimation of Water-Alcohol Mixture Flash Point; *Journal of the University of Chemical Technology and Metallurgy, 45, 1, 2010, 19-24.*

⁹ Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur (e.g., diesel fuel has a flash point between 38°C (100°F) and 93°C (200°F)).

¹⁰ Normally stable, but can become unstable at elevated temperatures and pressures (e.g. propene)



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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Well Ventillated

RESPIRATORY PROTECTION: Under normal conditions, the use of this product should not require respiratory

protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional. Use a surgical mask or similar respiratory

protection to cover nose, mouth and mucous membranes.

EYE PROTECTION: Safety glasses or chemical goggles should be worn to prevent eye contact. Refer U.S. OSHA 29

CFR 1910.133, European Standard EN166 or appropriate government standards.

SKIN PROTECTION: Wear Impervious gloves, such as latex or equivalent, should be worn to prevent skin contact and

especially cover any cuts, abrasions or skin lesions. Dispose of gloves as biohazardous material. Wash hands thoroughly after removing gloves. Use extreme caution with any sharp object to avoid percutaneous exposure to material. Wear outer protective garments such as a lab coat or gown. Refer U.S. OSHA 29 CFR 1910.138, European Standard EN374 or appropriate

government standards.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

SECTION 9: PHYSICAL/CHEMICAL CHARACTERISTICS

Vapor Density (AIR = 1): 1.6 Evaporation Rate (Butyl Acetate = 1): 2.5

Solubility in Water: Completely Miscible

Appearance and Odor: Clear & Colorless liquid w/ Characteristic Alcohol Scent

SECTION 10: STABILITY AND REACTIVITY

STABILITY (3 yrs.): Is generally considered to be stable when stored according to approved labeling except when exposed to excessive heat, sparks, open flame, other sources of ignition and incompatible chemicals.

CONDITIONS TO AVOID: Store at room temperature (15°-30°C or 59°-86°F). Do not refrigerate or freeze. Protect from

heat, humidity, and light, ignition sources & incompatible materials.

INCOMPATIBILITY (MATERIAL TO AVOID):

Concentrated nitric and sulfuric acids, strong oxidizing agents. Excessive heat.

Rust, dirt, dust and inert particulate solids in general. Iron, copper and heavy metals, their salts and alloys. Ultra violet light may induce photo decomposition.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: NONE; when stored as labeled, no known hazardous decomposition

products are formed during the shelf-life of this product.

HAZARDOUS POLYMERIZATION: NONE EXPECTED

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Potential Effects of

	Inhalation LC50 Rat	Oral LD50 Rat	Dermal LD50 Rat	Dermal LD50 Rabbit
Ethyl Alcohol	124.7 mg/L 4 h	7060 mg/kg	N/A	N/A
Hydrogen Peroxide	2 mg/L 4 h	801 mg/kg	4060 mg/kg	2000 mg/kg
Guaiac	N/A	N/A	N/A	N/A

Primary Routes of ExposureThe most likely routes of exposure are skin and eye contact. Inhalation may occur if mists are formed in product use.

May cause irritation or burning of skin and eyes by contact. Inhalation and ingestion of large volumes may

Acute Exposure cause burning of mucous membrane, respiratory irritation, and central nervous system depression.

Potential Effects of Chronic exposure may result in effects similar to those described for acute exposure. Frequent or long-term

Chronic Exposure contact may dry out the skin resulting in dermatitis. Repeated exposure may result in allergic reactions.

Symptoms of overexposure may include: throat irritation and coughing dry, red, cracked skin re

Symptoms of OverexposureSymptoms of overexposure may include: throat irritation and coughing; dry, red, cracked skin; red irritated eyes; headache, drowsiness, dizziness, stupor; and convulsions.

Carcinogenicity

No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 67/548/EEC

Annex I.



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Irritation/Sensitization May cause sensitization by inhalation and skin contact.

Other Effects None identified.

Conditions Aggravated by Exposure

Individuals with eye and skin disorders may find these conditions aggravated by exposure to this product. Individuals with eye, kidney, liver and cardiovascular, nervous and respiratory system disorders may find

these conditions aggravated by exposure to this product.

Mutagenicity None identified.

Reproductive Toxicity Reproductive effects have been reported in animal studies.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to fish and other water organisms.

Fresh Water Species Ethyl Alcohol

96 Hr LC50 Oncorhynchus mykiss: 12.0 - 16.0 mL/L [static]; 96 Hr LC50 Pimephales

promelas: >100 mg/L [static]; 96 Hr LC50 Pimephales promelas: 13400 – 15100 mg/L [flow-

Hydrogen Peroxide 96 Hr LC50 Pimephales promelas: 16.4 mg/L; 96 Hr LC50 Lepomis macrochirus: 18-56

mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 10.0-32.0 mg/L [static]

No information available.

Microtox Water Flea

> Ethyl Alcohol 48 Hr LC50 Daphnia magna: 9268 - 14221 mg/L; 24 Hr EC50 Daphnia magna: 10800

mg/L; 48 Hr EC50 Daphnia magna: 2 mg/L [Static]

Hydrogen Peroxide 24 Hr EC50 Daphnia magna: 7.7 mg/L; 48 Hr EC50 Daphnia magna: 18 - 32 mg/L

[Static]

Fresh Water Algae

Hydrogen Peroxide 72 Hr EC50 Chlorella vulgaris: 2.5 mg/L

Biodegradability No information available. Bioaccumulation No information available. No information available. Mobility

Other Adverse Effects No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Dispose of waste product, unused product and contaminated packaging in

compliance with federal, state and local regulations. If unsure of the applicable

requirements, contact the authorities for information.

WITH SPECIMEN: Patient specimens and all materials coming into contact with them should be handled

as if capable of transmitting infections and disposed of with proper precautions.

SECTION 14: TRANSPORT INFORMATION

International Shipping	IATA	Hazard Class	3
Information		Subsidiary Risk	None
		Special Provisions	A112
	IMDG	Hazard Class	3
		Subsidiary Risk	None
		Special Provisions	274
		Marine Pollutant	No
US DOT	Hazard	Class	3
	Subsidiary Risk		None
	Special Provisions		173.150; None
European ADR	Classific	cation	3
	Classific	cation Code	F1
	Subsidia	ary Risk	None
Canadian TDG	TDG CI	assification	3
	Subsidiary Risk		None
	Special Provisions 16		16

Department of Transportation Regulation ETHYL ALCOHOL:

Number (49 CFR 172.101) and Guide: 1170 127

HYDROGEN PEROXIDE: **Department of Transportation Regulation** Number (49 CFR 172.101): 2984 140 (8-20%

solution):



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SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): None

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): None

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): None

311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: Not Reportable

EU REGULATIONS

WATER HAZARD CLASS (GERMANY): WGK 1, low water endangering

CANADA

THIS PRODUCT IS EXEMPT FROM WHMIS LABEL AND SDS REQUIREMENTS.

INGREDIENTS ON INGREDIENT DISCLOSURE LIST: ETHYL ALCOHOL & HYDROGEN PEROXIDE INGREDIENTS WITH UNKNOWN TOXICOLOGICAL PROPERTIES: Product is Exempt.

Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS' 1.0% w/w (0.1% for carcinogens) or EU's ingredient specific concentrations required for reporting in Section 2.

SECTION 16: OTHER INFORMATION

Labeling: Hazard: warning: flammable, protect from heat. **Labeling:** This package conforms to 49 CFR 173.4

NC Poison Control Center: 1-800-672-1697

DISCLAIMER: The information provided in this Material Data Safety Sheet has been compiled from our experience and data presented in various technical publications. An MSDS for a substance is not primarily intended for use by the general consumer, focusing instead on the hazards of working with the material in an occupational setting. It is believed to be correct, however, it is the user's responsibility to determine the suitability of this information for the adoption of safety precautions deemed necessary. NDC, Inc. shall not be held liable for any damage resulting from handling or from contact with the product described in this SDS. We reserve the right to update SDS sheets from time to time as new information becomes available. It is the responsibility of the user to verify that they have the latest revision available.



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Pro Advantage™ Fecal Occult Blood Test Guaiac Slides

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: Pro Advantage™ Fecal Occult Blood Test (FOBT) (GUAIAC SLIDES)

FOBT/gFOBT SYNONYMS:

PRODUCT DESCRIPTION: Manufactured by impregnation of Guaiac gum, Gum guaiac, Gum guaiacum, Guaiacum. Fecal occult blood (FOB) refers to blood in the feces that is not visibly apparent. A fecal occult blood test (FOBT) checks for hidden (occult) blood in the stool (feces), more specifically stool guaiac tests look for heme.

Stool quaiac test for fecal occult blood (qFOBT): - The stool quaiac test involves smearing some feces on to some absorbent paper that has been treated with a chemical. Hydrogen peroxide is then dropped on to the paper; if trace amounts of blood are present, the paper will change color in one or two seconds. This method works as the heme component in hemoglobin has a peroxidase-like effect, rapidly breaking down hydrogen peroxide. In some settings such as gastric or proximal upper intestinal bleeding the quaiac method may be more sensitive than tests detecting globin because globin is broken down in the upper intestine to a greater extent than is heme. Optimal clinical performance of the stool quaiac test depends on preparatory dietary adjustment.

Guaiac gum: The resin from the wood of Guaiacum officinale L., or of Guaiacum sanctum L., (Fam. Zygophyllaceae), consisting of approximately 70% alpha- and beta-quaiaconic acids, 10% guaiaretic acid, and 15% guaiac beta-resin and small quantities of guaiac yellow, vanillin, etc.

> Irregular lumps enclosing fragments of vegetable tissues; or large, nearly homogeneous masses and occasionally more or less rounded or ovoid tears; externally, it is brownish black to dusky brown, acquiring a greenish colour on long exposure, the fractured surface having a glassy lustre, the thin pieces being transparent and varying in color from brown to yellowish orange; the powder is moderate yellow brown, becoming olive brown on exposure to air. It has

a mild balsamic odor.

PREPARATION: The trunk of guaiacum by the more invasive tree trunk in the West Indies was

crushed, and put it in heated ethanol and filtrated it. After the fractional distillation

of ethanol from the solution, gum guaiac was produced.

USES OF GUM GUAIAC: Gum quaiac is mainly used for anti-oxidants and preservatives of the chewy gum

bodying agent, buttermilk and fat. When used as antioxidants for vegetable oil

and butter, the amount of gum guaiac shall not exceed 1g/kg.

PREPARATION: TM slides feature special electrophoresis filter paper impregnated with guaiac. Since the guaiac is not in

solution, it will remain stable for three years.

USES: Fecal occult blood testing (FOBT), as its name implies, aims to detect subtle blood loss in the gastrointestinal

tract. Positive tests ("positive stool") may result from gastrointestinal bleeding and warrant further investigation for peptic ulcers or a malignancy (such as colorectal cancer or gastric cancer). The test does not directly detect colon cancer but is often used in clinical screening for that disease, but it can also be used to look for active

occult blood loss in anemia or when there are gastrointestinal symptoms.

Pro Advantage™ Fecal Occult Blood Test is a rapid, convenient, and non-offensive qualitative method for detecting occult blood in the stool. It is intended for professional use as an aid in the diagnosis of asymptomatic gastrointestinal conditions that may manifest themselves by the presence of occult blood in the stool. This test is recommended for use in routine hospital testing, mass screening programs for colorectal cancer, and in

testing of postoperative patients and newborn infants.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Non-Hazardous

ROUTES OF ENTRY:

POTENTIAL HEALTH EFFECTS

EYES: Non-Irritating

SKIN: None INGESTION: None INHALATION: N/A **ACUTE HEALTH HAZARDS:** N/A

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None



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Pro Advantage™ Fecal Occult Blood Test Guaiac Slides

SECTION 4: FIRST AID MEASURES

EYES: N/A

SKIN: Wash off with soap and water. No irritation is expected.

INGESTION: Physician may induce vomiting.INHALATION: No adverse affect is expected.

SECTION 5: FIRE-FIGHTING MEASURES

FLASH POINT: N/A
AUTOIGNITION TEMPERATURE: N/A

NFPA HAZARD CLASSIFICATION

HEALTH: 1 **FLAMMABILITY:** 0 **REACTIVITY:** 0

HMIS HAZARD CLASSIFICATION

HEALTH: N/A FLAMMABILITY: N/A REACTIVITY: N/A PROTECTION: N/A

EXTINGUISHING MEDIA: N/A

SPECIAL FIRE FIGHTING PROCEDURES: N/A

UNUSUAL FIRE AND EXPLOSION HAZARDS: N/A

HAZARDOUS DECOMPOSITION PRODUCTS: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: N/A

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store at room temperature (15°-30°C or 59°-86°F). Do not refrigerate or freeze. Protect from heat, humidity, and

light. Do not store with volatile chemicals, e.g. iodine, chlorine (bleach), bromine or ammonia. When stored as recommended, slides will maintain sensitivity up to three years from date of manufacture. The guaiac slides are beige in color. However, if not stored as recommended, they may discolor and turn blue. Do not use after expiration

date.

OTHER PRECAUTIONS: For in vitro diagnostic use. Do not substitute reagents from kits from other manufacturers. You may interchange

slides & reagent from Pro AdvantageTM fecal occult blood kits as long as they are within the expiration date. Patient specimens and all materials coming into contact with them should be handled as if capable of transmitting

infections and disposed of with proper precautions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: NONE

RESPIRATORY PROTECTION: NONE

EYE PROTECTION: NONE

SKIN PROTECTION: Polyethylene Gloves

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

EXPOSURE LIMITS: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Light brown/Beige in color **ODOR:** mild balsamic/vanillin Organic odor

pH AS SUPPLIED: N/A

VAPOR PRESSURE (mmHg): N/A
VAPOR DENSITY (AIR = 1): N/A
SPECIFIC GRAVITY (H2O = 1): N/A

SOLUBILITY IN WATER: RENDERS TEST INVALID

GUAIAC: Insoluble in water; soluble in fats; dissolves readily but incompletely in ethanol, ether, and solutions of alkalis.

PERCENT SOLIDS BY WEIGHT: 100%

PERCENT VOLATILE: NONE



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Pro Advantage™ Fecal Occult Blood Test Guaiac Slides

SECTION 10: STABILITY AND REACTIVITY

STABILITY: 3 YEARS

CONDITIONS TO AVOID (STABILITY): Store at room temperature (15°-30°C or 59°-86°F). Do not refrigerate or freeze. Protect from heat,

humidity, and light.

INCOMPATIBILITY (MATERIAL TO AVOID): Do not store with volatile chemicals, e.g. iodine, chlorine (bleach), bromine or ammonia.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: NONE

HAZARDOUS POLYMERIZATION: NONE EXPECTED

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Eyes: No irritant Skin: No irritation expected

 Respiratory:
 None
 Oral LD50:
 N/A

 Dermal LD50:
 N/A
 Chronic Toxicity:
 None

 Carcinogenicity:
 None
 Mutanogenicity:
 None

Teratogenicity: None Occupational Exposure: No adverse effect expected

Limits: None Other: None

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Not Applicable

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: No procedure necessary.

WITH SPECIMEN: Patient specimens and all materials coming into contact with them should be handled as if capable of transmitting

infections and disposed of with proper precautions.

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Laboratory chemicals - non hazardous, Class 85

HAZARD CLASS: ID NUMBER: PACKING GROUP: LABEL STATEMENT:

WATER TRANSPORTATION

PROPER SHIPPING NAME: Laboratory chemicals - non hazardous, Class 85

HAZARD CLASS: ID NUMBER: PACKING GROUP: LABEL STATEMENTS:

AIR TRANSPORTATION

PROPER SHIPPING NAME: Laboratory chemicals - non hazardous, Class 85

HAZARD CLASS: ID NUMBER: PACKING GROUP: LABEL STATEMENTS:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCE CONTROL ACT): None CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): None

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): None 311/312 HAZARD CATEGORIES: None

313 REPORTABLE INGREDIENTS: Not Reportable

SECTION 16: OTHER INFORMATION

DISCLAIMER: The information provided in this Material Data Safety Sheet has been compiled from our experience and data presented in various technical publications. It is believed to be correct, however, it is the user's responsibility to determine the suitability of this information for the adoption of safety precautions deemed necessary. NDC, Inc. shall not be held liable for any damage resulting from handling or from contact with the product described in this SDS. We reserve the right to update SDS sheets from time to time as new information becomes available. It is the responsibility of the user to verify that they have the latest revision available.

NFPA 704

	Health (Blue)		Flammability (Red)
0	Poses no health hazard, no precautions necessary (e.g., water)	0	Will not burn (e.g., argon)
1	Exposure would cause irritation with only minor residual injury (e.g., acetone)	1	Must be heated before ignition can occur (e.g., mineral oil). Flash point over 93°C (200°F)
2	Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g., ethyl ether)	2	Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur (e.g., diesel fuel). Flash point between 38°C (100°F) and 93°C (200°F)
3	Short exposure could cause serious temporary or moderate residual injury (e.g., <u>chlorine gas</u>)	3	Liquids and solids that can be ignited under almost all ambient temperature conditions (e.g., gasoline). Liquids having a Flash point below 23°C (73°F) and having a Boiling point at or above 38°C (100°F) or having a Flash point between 23°C (73°F) and 38°C (100°F)
4	Very short exposure could cause death or major residual injury (e.g., hydrogen.cyanide , phosphine , carbon monoxide)	4	Will rapidly or completely vaporize at normal atmospheric pressure and temperature, or is readily dispersed in air and will burn readily (e.g., propane, hydrogen). Flash point below 23°C (73°F)
	Instability/Reactivity (Yellow)		Special (White)
0	Instability/Reactivity (Yellow) Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium)		Special (White) The white "special notice" area can contain several symbols. The following symbols are defined by the NFPA 704 standard.
0	Normally stable, even under fire exposure conditions, and is not reactive with		The white "special notice" area can contain several symbols. The following
0 1 2	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium) Normally stable, but can become unstable at elevated temperatures and	OX	The white "special notice" area can contain several symbols. The following
1	Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium) Normally stable, but can become unstable at elevated temperatures and pressures (e.g. propene) Undergoes violent chemical change at elevated temperatures and pressures, reacts violently with water, or may form explosive mixtures with water (e.g.,	ox w	The white "special notice" area can contain several symbols. The following symbols are defined by the NFPA 704 standard.

CHEMTREC® (24 hours)

1-800-424-9300

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)
For calls originating elsewhere:
703-527-3887 (Collect calls are accepted)

INFOTRAC (24 hours)

1-800-535-5053

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)
For calls originating elsewhere:
352-323-3500 (Collect calls are accepted)

CHEMTEL, INC. (24 hours)

1-888-255-3924

(Toll-free in the U.S., Canada, Puerto Rico and the U.S. Virgin Islands)
For calls originating elsewhere:
813-248-0585 (Collect calls are accepted)

3E COMPANY (24 hours)

1-800-451-8346

(Toll-free in the U.S., Canada, and the U.S. Virgin Islands)
For calls originating elsewhere:
760-602-8703 (Collect calls are accepted)

The emergency response information services shown above have requested to be listed as providers of emergency response information and have agreed to provide emergency response information to all callers. They maintain periodically updated lists of state and Federal radiation authorities who provide information and technical assistance on handling incidents involving radioactive materials.

NATIONWIDE POISON CONTROL CENTER (United States Only)

Emergency and information calls are answered by the nearest Poison Center (24 hours): 1-800-222-1222 (toll-free in the U.S.).

NATIONAL RESPONSE CENTER (NRC)

The NRC, which is operated by the U.S. Coast Guard, receives reports required when dangerous goods and hazardous substances are spilled. After receiving notification of an incident, the NRC will immediately notify the appropriate Federal On-Scene Coordinator and concerned Federal agencies. Federal law requires that anyone who releases into the environment a reportable quantity of a hazardous substance (including oil when water is, or may be affected) or a material identified as a marine pollutant must **immediately** notify the NRC. When in doubt as to whether the amount released equals the required reporting levels for these materials, the NRC should be notified.

CALL NRC (24 hours) 1-800-424-8802 (Toll-free in the U.S., Canada, and the U.S. Virgin Islands); 202-267-2675 in the District of Columbia

Calling the emergency response telephone number, CHEMTREC®, CHEMTEL, INC., INFOTRAC or 3E COMPANY, does not constitute compliance with regulatory requirements to call the NRC.