

Material Safety Data Sheet



Prolex™ Extraction Reagent Set

1. Product and company identification

Product name	: Prolex™ Extraction Reagent Set	Code
Trade name	: Prolex™ Extraction Reagent Set	PL.046
	Streptococcal Grouping Reagent Extraction Reagent 1	PL.047
	Streptococcal Grouping Reagent Extraction Reagent 2	PL.048
	Streptococcal Grouping Reagent Extraction Reagent 3	PL.049
Material uses	: Prolex™ Extraction Reagent Set, used in combination with Prolex™ Streptococcal Grouping Latex Reagents, provides a rapid method for the serological identification of groups A, B, C, D, F and G of the Lancefield groups of streptococci grown on agar plates.	
Supplier/Manufacturer	: Pro-Lab Diagnostics 20 Mural Street, Unit 4 Richmond Hill, ON Canada L4B 1K3 Tel: +1-905-731-0300 Fax: +1-905-731-0206 www.pro-lab.com	
Code	: PL.046, PL.047, PL.048, PL.049	
MSDS authored by	: KMK Regulatory Services inc.	
<u>In case of emergency</u>	: 905-731-0300 –Monday to Friday 8:30 am to 5:00 pm Eastern Standard Time. 416-230-0692 –Outside the above hours.	
Product type	: Liquid.	

2. Hazards identification

Emergency overview

Color	: PL.047 Yellow. PL.048 Red. PL.049 Blue.
Physical state	: PL.047 Liquid. [Transparent.] PL.048 Liquid. [Transparent.] PL.049 Liquid. [Transparent.]
Signal word	: DANGER!
Hazard statements	: CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.
Precautions	: Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.
OSHA/HCS status	: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
<u>Potential acute health effects</u>	
Inhalation	: PL.047 Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. PL.048 Corrosive to the respiratory system. PL.049 Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: PL.047 Toxic if swallowed. PL.048 May cause burns to mouth, throat and stomach. PL.049 No known significant effects or critical hazards.

2. Hazards identification

Skin : PL.047 Irritating to skin.
 PL.048 Corrosive to the skin. Causes burns.
 PL.049 Irritating to skin.

Eyes : PL.047 Irritating to eyes.
 PL.048 Corrosive to eyes. Causes burns.
 PL.049 Irritating to eyes.

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage.

Carcinogenicity : Contains material which may cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Target organs : Contains material which may cause damage to the following organs: upper respiratory tract, skin, eyes, teeth.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
 respiratory tract irritation
 coughing

Ingestion : Adverse symptoms may include the following:
 stomach pains

Skin : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur

Eyes : Adverse symptoms may include the following:
 pain
 watering
 redness

Medical conditions aggravated by over-exposure : Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

See toxicological information (section 11)

3. Composition/information on ingredients

United States

Name	CAS number	%
Streptococcal Grouping Reagent Extraction Reagent 1 - PL.047 Sodium nitrite	7632-00-0	5 - 10
Streptococcal Grouping Reagent Extraction Reagent 2 - PL.048 Acetic acid	64-19-7	<25
Streptococcal Grouping Reagent Extraction Reagent 3 - PL.049 1,3-Propanediol, 2-amino-2-(hydroxymethyl)- Polyethylene oxide	77-86-1 25322-68-3	10 - 30 1 - 5

3. Composition/information on ingredients

Canada

Name	CAS number	%
Streptococcal Grouping Reagent Extraction Reagent 1 - PL.047 Sodium nitrite	7632-00-0	5 - 10
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

- Eye contact** : Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
- Skin contact** : In case of contact, immediately flush skin with plenty of water for at least 20 minutes while removing contaminated clothing and shoes. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Call medical doctor or poison control center immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Call medical doctor or poison control center immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

5. Fire-fighting measures

- Flammability of the product** : No specific fire or explosion hazard.
- Extinguishing media**
 - Suitable** : Use an extinguishing agent suitable for the surrounding fire.
 - Not suitable** : None known.
- Special exposure hazards** : This material is very toxic to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

- Personal precautions** : Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).
- Environmental precautions** : Hazardous to aquatic environment May cause long-term adverse effects in the aquatic environment. Prevent leaking substances from running into the aquatic environment or the sewage system.
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Store between the following temperatures: 2°C (36°F) to 8°C (46°F).

8. Exposure controls/personal protection

United States

Ingredient	Exposure limits
Acetic acid	<p>ACGIH TLV (United States, 1/2008). STEL: 37 mg/m³ 15 minute(s). STEL: 15 ppm 15 minute(s). TWA: 25 mg/m³ 8 hour(s). TWA: 10 ppm 8 hour(s).</p> <p>NIOSH REL (United States, 6/2008). STEL: 37 mg/m³ 15 minute(s). STEL: 15 ppm 15 minute(s). TWA: 25 mg/m³ 10 hour(s). TWA: 10 ppm 10 hour(s).</p> <p>OSHA PEL (United States, 11/2006). TWA: 25 mg/m³ 8 hour(s). TWA: 10 ppm 8 hour(s).</p>
Polyethylene oxide	<p>AIHA WEEL (United States, 1/2008). TWA: 10 mg/m³ 8 hour(s). Form: Aerosol</p>

Canada

8. Exposure controls/personal protection

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredient	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
Acetic acid	US ACGIH 1/2009	10	25	-	15	37	-	-	-	-	
	AB 6/2008	10	25	-	15	37	-	-	-	-	
	BC 6/2008	10	-	-	15	-	-	-	-	-	
	ON 6/2008	10	25	-	15	37	-	-	-	-	
	QC 6/2008	10	25	-	15	37	-	-	-	-	
Polyethylene oxide	US AIHA 1/2009	-	10	-	-	-	-	-	-	-	[a]

Form: [a]Aerosol

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : Personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits.

Hygiene measures : Ensure that eyewash stations and safety showers are close to the workstation location. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Personal protection

Respiratory

: Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.

Hands

: Use gloves appropriate for work or task being performed. Recommended: Nitrile gloves.

Eyes

: Safety eyewear should be used when there is a likelihood of exposure. Recommended: Chemical splash goggles or face shield.

Skin

: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: Rubber apron and/on long sleeves.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties

Physical state : PL.047 Liquid. [Transparent.]
 PL.048 Liquid. [Transparent.]
 PL.049 Liquid. [Transparent.]

Color : PL.047 Yellow.
 PL.048 Red.
 PL.049 Blue.

Solubility : Miscible in water.

10. Stability and reactivity

- Chemical stability** : The product is stable.
- Conditions to avoid** : Avoid exposure - obtain special instructions before use.
- Materials to avoid** : Reactive or incompatible with the following materials: oxidizing materials, reducing materials, organic materials, metals, acids and moisture.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.

11. Toxicological information

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Streptococcal Grouping Reagent Extraction Reagent 1 - PL.047 Sodium nitrite	LD50 Oral	Rat	85 mg/kg	-
Streptococcal Grouping Reagent Extraction Reagent 2 - PL.048 Acetic acid	LD50 Oral	Rat	3310 mg/kg	-
Streptococcal Grouping Reagent Extraction Reagent 3 - PL.049 1,3-Propanediol, 2-amino-2-(hydroxymethyl)-	LD50 Oral	Rat	5900 mg/kg	-

Chronic toxicity

Classification

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Sodium nitrite	-	2A	-	-	-	-

12. Ecological information

- Environmental effects** : Very toxic to aquatic organisms.

Aquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Sodium nitrite	Acute LC50 1100 ug/L Fresh water	Crustaceans - Cherax quadricarinatus - 0.1 to 0.14 g	48 hours
	Acute LC50 48 ug/L Fresh water	Fish - Ictalurus punctatus - Fingerling - 50 to 76 mm	96 hours
Acetic acid	Chronic NOEC 0.02 mg/L Fresh water	Fish - Labeo rohita - Fingerling	96 hours
	Acute EC50 65000 ug/L Fresh water	Daphnia - Daphnia magna - Neonate - <24 hours	48 hours
Polyethylene oxide	Acute LC50 50.1 u/L Marine water	Crustaceans - Artemia sp.	48 hours
	Acute LC50 75000 ug/L Fresh water	Fish - Lepomis macrochirus - 5.3 to 7.2 cm - 3.5 to 3.9 g	96 hours
	Acute LC50 >1000000 ug/L Fresh water	Fish - Salmo salar - Parr - 8.2 to 11.7 cm - 5.1 to 14.1 g	96 hours

- Other adverse effects** : No known significant effects or critical hazards.

13. Disposal considerations


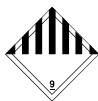


- Waste disposal** : The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Empty containers or liners may retain some product residues. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor.

Disposal should be in accordance with applicable regional, national and local laws and regulations.

13. Disposal considerations

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite)	9	III		Limited Quantity Exemption
TDG Classification	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite)	9	III		Limited Quantity Exemption
IMDG Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite)	9	III		Limited Quantity Exemption
IATA-DGR Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium nitrite)	9	III		Limited Quantity Exemption

PG* : Packing group

AERG : 171

Exemption to the above classification may apply.

15. Regulatory information

United States

HCS Classification : PL.047 Oxidizing material
 Toxic material
 Irritating material
 Carcinogen
 Target organ effects
 PL.048 Corrosive material
 Target organ effects
 PL.049 Irritating material

U.S. Federal regulations : **TSCA 5(a)2 final significant rules:** Sodium nitrite
United States inventory (TSCA 8b): All components are listed or exempted.
TSCA 8(d) H and S data reporting: Sodium nitrite: 1991
TSCA 12(b) one-time export: Sodium nitrite
TSCA 12(b) annual export notification: Sodium nitrite

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: Sodium nitrite; Acetic acid

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
 Sodium nitrite: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard;
 Acetic acid: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found.

Clean Water Act (CWA) 311: Sodium nitrite; Acetic acid

Clean Air Act (CAA) 112 accidental release prevention: No products were found.

Clean Air Act (CAA) 112 regulated flammable substances: No products were found.

Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

15 . Regulatory information

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	Sodium nitrite	7632-00-0	5 - 10
Supplier notification	Sodium nitrite	7632-00-0	5 - 10

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations :

- Connecticut Carcinogen Reporting:** None of the components are listed.
- Connecticut Hazardous Material Survey:** None of the components are listed.
- Florida substances:** None of the components are listed.
- Illinois Chemical Safety Act:** None of the components are listed.
- Illinois Toxic Substances Disclosure to Employee Act:** None of the components are listed.
- Louisiana Reporting:** None of the components are listed.
- Louisiana Spill:** None of the components are listed.
- Massachusetts Spill:** None of the components are listed.
- Massachusetts Substances:** The following components are listed: Sodium nitrite; Acetic acid
- Michigan Critical Material:** None of the components are listed.
- Minnesota Hazardous Substances:** None of the components are listed.
- New Jersey Hazardous Substances:** The following components are listed: Sodium nitrite; Acetic acid
- New Jersey Spill:** None of the components are listed.
- New Jersey Toxic Catastrophe Prevention Act:** None of the components are listed.
- New York Acutely Hazardous Substances:** The following components are listed: Sodium nitrite; Acetic acid
- New York Toxic Chemical Release Reporting:** None of the components are listed.
- Pennsylvania RTK Hazardous Substances:** The following components are listed: Sodium nitrite; Acetic acid
- Rhode Island Hazardous Substances:** None of the components are listed.

California Prop. 65

No products were found.

Canada

WHMIS (Canada) :

- PL.047 Class C: Oxidizing material.
Class D-1B: Material causing immediate and serious toxic effects (Toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).
- PL.048 Class E: Corrosive material
- PL.049 Class D-2B: Material causing other toxic effects (Toxic).

15 . Regulatory information

Canadian lists : **CEPA Toxic substances:** None of the components are listed.
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed: Sodium nitrite
Alberta Designated Substances: None of the components are listed.
Ontario Designated Substances: None of the components are listed.
Quebec Designated Substances: None of the components are listed.

Canada inventory : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists : **Australia inventory (AICS):** All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

16 . Other information

United States

Label requirements : CAUSES RESPIRATORY TRACT, EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE. SUSPECT CANCER HAZARD - CONTAINS MATERIAL WHICH MAY CAUSE CANCER.

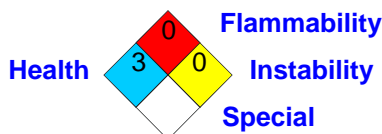
Hazardous Material Information System (U.S.A.) :

Health	*	3
Flammability		0
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



16 . Other information

Canada

WHMIS (Canada)

:



Date of issue : 12/01/2009

Date of previous issue : 04/01/2009

Version : 1.1

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.