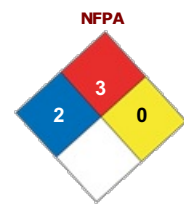


Personal Protective Equipment			GHS Pictograms		
					
Chemical Splash Goggles	Lab Coat	Protective Gloves	Acute toxicity	May cause damage to organs	Highly flammable liquid and vapour

## SECTION 1 - IDENTIFICATION

**Product Name:** ThinPrep® Rinse II Solution  
**Hologic P/N:** RD-01487 Rev.001  
**Manufacturer Name:** Hologic, Inc.  
**Address:** 250 Campus Drive  
Marlborough, Massachusetts 01752  
USA  
**General Phone Number:** (800) 442-9892  
**Emergency Phone Number:** (800) 424-9300  
**CHEMTREC:** CHEMTREC 24-Hour Emergency Telephone Number:  
(800)424-9300  
CHEMTREC 24-Hour Emergency Telephone Number: (Outside of the U.S. and Canada): (703)527-3887  
**MSDS Creation Date:** June 15, 2011  
**MSDS Revision Date:** June 15, 2011  
**MSDS Format:** GHS  
**GHS Class:** Flammable Liquid, Category 2, Acute Toxicity Inhalation, Category 3



HMIS	
Health Hazard	2
Fire Hazard	3
Reactivity	0
Personal Protection	X

\* Chronic Health Effects

## SECTION 2 - HAZARD(S) IDENTIFICATION

**Emergency Overview:** DANGER! Highly flammable liquid and vapor. Irritant.  
**Route of Exposure:** Eyes. Skin. Inhalation. Ingestion.  
**Potential Health Effects:**  
**Eye:** Causes eye irritation  
**Skin:** Causes skin irritation  
**Inhalation:** Harmful by inhalation. Causes respiratory tract irritation  
**Ingestion:** Ingestion can cause nausea, vomiting, diarrhea and gastrointestinal irritation.  
**Chronic Health Effects:** Possible risks of irreversible effects. May cause damage to liver and kidney through prolonged or repeated exposure.  
**Signs/Symptoms:** Overexposure can cause headaches, dizziness, nausea, and vomiting.  
**Target Organs:** Eyes. Skin. Respiratory system. Digestive system. Central nervous system. Kidney. Liver. Spleen.  
**Aggravation of Pre-Existing Conditions:** Persons with a history of chronic respiratory disease, skin disease, or central or peripheral nervous system disorders may be at increased risk from exposure to this product.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
Ethylene Glycol	107-21-1	30 - 60 %	203-473-3
Isopropanol	67-63-0	1 - 5 %	200-661-7
Ethanol	64-17-5	30 - 60 %	200-578-6

Glacial Acetic Acid	64-19-7	<1 %
Water	7732-18-5	1 - 5 %

#### SECTION 4 - FIRST AID MEASURES

<b>Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
<b>Skin Contact:</b>	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Wash contaminated clothing before re-use.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.
<b>Note to Physicians:</b>	Effects may be delayed. Ethanol is the predominant alcohol

#### SECTION 5 - FIRE FIGHTING MEASURES

<b>Flammable Properties:</b>	Flammable liquid.
<b>Flash Point:</b>	14°C (56°F) based on ethanol
<b>Flash Point Method:</b>	closed cup
<b>Auto Ignition Temperature:</b>	363°C (685°F) by volume (based on ethanol)
<b>Lower Flammable/Explosive Limit:</b>	3.3 % by volume (based on ethanol)
<b>Upper Flammable/Explosive Limit:</b>	19 % by volume (based on ethanol)
<b>Fire Fighting Instructions:</b>	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
<b>Extinguishing Media:</b>	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
<b>Unsuitable Media:</b>	Do not use a solid water stream as it may scatter and spread fire.
<b>Protective Equipment:</b>	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Universal Fire And Explosion Hazards:</b>	Fire hazard when exposed to heat, flame or oxidizers. Vapor mixtures are explosive Vapors can flow along surfaces to distant ignition sources and flash back. Closed storage containers may pressurize and rupture under fire conditions.
<b><u>NFPA Ratings:</u></b>	
<b>NFPA Health:</b>	2
<b>NFPA Flammability:</b>	3
<b>NFPA Reactivity:</b>	0

#### SECTION 6 - ACCIDENTAL RELEASE MEASURES

<b>Personnel Precautions:</b>	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
<b>Environmental Precautions:</b>	Avoid runoff into storm sewers, ditches, and waterways.
<b>Methods for containment:</b>	Contain spills with an inert absorbent material such as soil, sand or oil dry.
<b>Methods for cleanup:</b>	Remove all sources of ignition. Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal.
<b>Other Precautions:</b>	Flammable, eliminate ignition sources. Provide ventilation. Use proper personal protective equipment as listed in section 8.

#### SECTION 7 - HANDLING and STORAGE

<b>Handling:</b>	Use with adequate ventilation. Wash thoroughly after handling. Avoid breathing vapor, aerosol or mist. Avoid contact with skin, eyes and clothing. Material will accumulate static charges which may cause an electrical spark (ignition)
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source). Use proper grounding procedures. Use spark-proof tools and explosion-proof equipment. Do not reuse containers without proper cleaning or reconditioning. A void use in confined spaces. Keep out of the reach of children.

- Storage:** Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use.  
Recommended storage temperature is between 15°C and 30°C (59°F and 86°F).
- Special Handling Procedures:** DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal container.  
Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.
- Hygiene Practices:** Wash thoroughly after handling. Avoid contact with eyes and skin. Avoid inhaling vapor or mist.

**SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES**

- Engineering Controls:** Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.
- Eye/Face Protection:** Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
- Skin Protection Description:** Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
- Hand Protection Description:** Wear appropriate protective gloves. Consult glove manufacturer's data for permeability data. Nitrile rubber or natural rubber gloves are recommended.
- Respiratory Protection:** Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. Comply with the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149  
Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
- Other Protective:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**EXPOSURE GUIDELINES**

Ingredient	GERMAN MAK	Guideline OSHA	Guideline ACGIH	Thailand	Taiwan
Ethylene Glycol	MAK-TWA : 10 ppm MAK-STEL: 20 ppm Skin: yes	Not established.	TLV-ceiling/Peak: 100 mg/m3 (Aerosol.)		
Isopropanol	MAK-TWA : 200 ppm MAK-STEL: 400 ppm		TLV-TWA : 200 ppm TLV-STEL: 400 ppm	Not established.	OEL-TWA : 400 ppm (980 mg/m3) OEL-STEL: 500 ppm (1229 mg/m3)
Ethanol	MAK-TWA : 500 ppm MAK-STEL: 1000 ppm		TLV-TWA : 1000 ppm		
Ingredient	Switzerland	United Kingdom	Sweden	Spain	Singapore
Ethylene Glycol		OEL-TWA : 10 mg/m3 OEL-STEL: 104 mg/m3 Skin: yes	LLV-TWA : 10 ppm LLV-STV : 20 ppm Skin: yes	VLA-ED: 20 ppm VLA-EC: 40 ppm Skin: yes	
Isopropanol	MAK-TWA : 200 ppm MAK-STEL: 400 ppm	OEL-TWA : 400 ppm OEL-TWA : 500 ppm Skin: yes	LLV-TWA : 150 ppm LLV-STV : 250 ppm	VLA-ED: 400 ppm VLA-EC: 500 ppm	OEL-TWA : 400 ppm (983 mg/m3)
Ethanol		OEL-TWA : 1000 ppm OEL-STEL: 3000 ppm	LLV 500 ppm STV : 1000 ppm	VLA-ED: 1000 ppm	
Ingredient	Portugal	Phillipines	Norway	Netherlands	Malaysia
Ethylene Glycol			OEV-TWA : 25 ppm	MAC-TWA : 20 ppm MAC-STEL: 40 ppm Skin: yes	OEL-ceiling: 40 ppm (100 mg/m3)
Isopropanol	OEL-TWA : 200	OEL-TWA : 400	OEV-TWA : 100		OEL-TWA : 400

	ppm OEL-STEL: 400 ppm	ppm (980 mg/m3)	ppm		ppm (983 mg/m3)
Ethanol			OEL-TWA: 500 ppm	MAC-TWA: 260 mg/m3 MAC-STEL: 1000 mg/m3	OEL-TWA: 1000 ppm (1880 mg/m3)
<b>Ingredient</b>	<b>Korea</b>	<b>Japan</b>	<b>Ireland</b>	<b>Hong Kong</b>	<b>Greece</b>
Ethylene Glycol		Not established.	OELV-TWA: 10 mg/m3 OELV-STEL: 125 mg/m3 Skin: yes	OEL-Ceiling: 100 mg/m3	
Isopropanol	OEL-TWA: 400 ppm (980 mg/m3)	OEL-Ceiling/Peak: 400 ppm (980 mg/m3)	OEL-TWA: 200 ppm OEL-STEL: 400 ppm Skin: yes	OEL-TWA: 400 ppm (983 mg/m3) OEL-STEL: 500 ppm (1230 mg/m3) Skin: yes	OEL-TWA: 400 ppm OEL-STEL: 500 ppm
Ethanol		Not established.	OEL-TWA: 1000 ppm	OEL-TWA: 1000 ppm (1880 mg/m3)	
<b>Ingredient</b>	<b>France</b>	<b>Finland</b>	<b>Denmark</b>	<b>China</b>	<b>Belgium</b>
Ethylene Glycol	VL-STEL: 50 ppm	OEV-TWA: 50 ppm OEV-STEL: 75 ppm		OEL-TWA: 20 mg/m3 OEL-STEL: 40 mg/m3	OEL-TWA: 50 ppm Skin: yes
Isopropanol	VLCT-STEL: 400 ppm	OEV-TWA: 200 ppm OEV-STEL: 250 ppm	OEL-TWA: 200 ppm Skin: yes	OEL-TWA: 350 mg/m3 OEL-STEL: 700 mg/m3	OEL-TWA: 200 ppm OEL-STEL: 400 ppm
Ethanol	VL-TWA: 1000 ppm VLCT-STEL: 5000 ppm	OEV-TWA: 1000 ppm OEV-STEL: 1300 ppm		Not established.	OEL-TWA: 1000 ppm
<b>Ingredient</b>	<b>Austria</b>	<b>Australia</b>			
Ethylene Glycol		NES-STEL: 120 mg/m3 NES-TWA: 60 mg/m3			
Isopropanol	MAK-TWA: 200 ppm MAK-STEL: 800 ppm	NES-TWA: 400 ppm NES-STEL: 500 ppm			
Ethanol		NES-TWA: 1000 ppm			

## SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

<b>Physical State:</b>	Liquid.
<b>Color:</b>	Clear
<b>Odor:</b>	Alcohol-like
<b>Boiling Point:</b>	80.5°C (177°F)
<b>Melting Point:</b>	No Data
<b>Specific Gravity:</b>	0.92 @ 24 °C ((Ref: water = 1).)
<b>Solubility:</b>	Miscible in water
<b>Vapor Density:</b>	Not determined.
<b>Vapor Pressure:</b>	Not determined.
<b>Percent Volatile:</b>	Not determined.
<b>Evaporation Rate:</b>	Not determined.
<b>pH:</b>	5.5
<b>Flash Point:</b>	14°C (56°F) based on ethanol
<b>Flash Point Method:</b>	closed cup
<b>Auto Ignition Temperature:</b>	363°C (685°F) by volume (based on ethanol)

## SECTION 10 - STABILITY and REACTIVITY

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Hazardous Polymerization:</b>	Not reported.
<b>Conditions to Avoid:</b>	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and

oxidizing conditions. Confined spaces.

**Incompatible Materials:** Oxidizing agents, reducing agents, acids, alkali metals, and metals as powders (e.g. hafnium, raney nickel), potassium, sodium, acid anhydrides, acid chlorides, powdered aluminum, powdered magnesium.

**Special Decomposition Products:** Oxides of carbon (carbon dioxide and monoxide)

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Ethylene Glycol :

**Eye:** Eye - Rabbit; Standard Draize Test. : 500 mg/24H; mild.  
Eye - Rabbit; Standard Draize Test. : 1440 mg/6H; Moderate. (RTECS)

**Skin:** Skin - Rabbit Open irritation test: 555 mg - [mild ]  
Skin - Rabbit LD50: 9530 uL/kg - [Details of toxic effects not reported other than lethal dose value.](RTECS)

**Inhalation:** Inhalation - Rat LC: >200 mg/m3/4H; Details of toxic effects not reported other than lethal dose value.  
Inhalation - Mouse LC: >200 mg/m3/2H; Details of toxic effects not reported other than lethal dose value. (RTECS)

**Ingestion:** Oral - Rat LD50: 4700 mg/kg [Details of toxic effects not reported other than lethal dose value.]  
Inhalation - Mouse LD50: 5500 mg/kg [Details of toxic effects not reported other than lethal dose value.]

### Isopropanol :

**RTECS Number:** NT8050000

**Eye:** Eye - Rabbit Standard Draize test: 100 mg  
Eye - Rabbit Standard Draize test: 10 mg  
Eye - Rabbit Standard Draize test: 100 mg/24H (RTECS)

**Skin:** Administration onto the skin - Rabbit Standard Draize test: 500 mg  
Administration onto the skin - Rabbit LD50: 12800 mg/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)

**Inhalation:** Inhalation - Rat LC50: 16000 ppm/8H [Details of toxic effects not reported other than lethal dose value.]  
Inhalation - Mouse LC50: 53000 mg/m3 [Behavioral - general anesthetic Lungs, Thorax, or Respiration - other changes]  
Inhalation - Rat LC50: 72600 mg/m3 [Behavioral - general anesthetic Lungs, Thorax, or Respiration - other changes] (RTECS)

**Ingestion:** Oral - Rat LD50: 5045 mg/kg [Behavioral - altered sleep time (including change in righting reflex) Behavioral - somnolence (general depressed activity)]  
Oral - Mouse LD50: 3600 mg/kg [Behavioral - altered sleep time (including change in righting reflex) Behavioral - somnolence (general depressed activity)]  
Oral - Mouse LD50: 3600 mg/kg [Behavioral - general anesthetic]  
Oral - Rat LD50: 5000 mg/kg [Behavioral - general anesthetic] (RTECS)

### Ethanol :

**RTECS Number:** KQ6300000

**Eye:** Eye - Rabbit Standard Draize test: 500 mg  
Eye - Rabbit Standard Draize test: 500 mg/24H  
Eye - Rabbit Rinsed with water: 100 mg/4S (RTECS)

**Skin:** Administration onto the skin - Rabbit Open irritation test: 400 mg  
Administration onto the skin - Rabbit Standard Draize test: 20 mg/24H (RTECS)

**Inhalation:** Inhalation - Rat LC50: 20000 ppm/10H [Details of toxic effects not reported other than lethal dose value.]  
Inhalation - Mouse LC50: 39 gm/m3/4H [Details of toxic effects not reported other than lethal dose value.] (RTECS)

**Ingestion:** Oral - Rat LD50: 7060 mg/kg [Lungs, Thorax, or Respiration - other changes]  
Oral - Mouse LD50: 3450 mg/kg [Details of toxic effects not reported other than lethal dose value.]  
Oral - Rat LD50: 7 gm/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)

## SECTION 12 - ECOLOGICAL INFORMATION

**Environmental Fate:** No environmental information found for this product.

### Ethylene Glycol :

**Ecotoxicity:** Aquatic Toxicity:  
LC50 (96 hr) rainbow trout (41000 mg/L) Conditions: 20 deg C.  
LC50 (96 hr) bluegill (27500 mg/L)  
LC50 (96 hr) goldfish (27500 mg/L)  
30 min EC50 Photobacterium phosphoreum (620.0 mg/L)  
LC50 (48 hr) water flea (46300 mg/L.)

**Ethanol :**

Ecotoxicity: Material has very low aquatic toxicity.  
LC50/96h/Fathead minnows =: 14200 mg/L  
EC50 (30 min) Photo bacterium phosphoreum:: 34634 mg/L

**SECTION 13 - DISPOSAL CONSIDERATIONS**

Waste Disposal: Dispose of in accordance with Local, State, Federal and Provincial regulations.  
RCRA Number: D001

**SECTION 14 - TRANSPORT INFORMATION**

DOT Shipping Name: Flammable liquid, n.o.s., (ethanol)  
DOT UN Number: UN1993  
DOT Hazard Class: 3  
DOT Packing Group: II  
IATA Shipping Name: Flammable liquids, toxic, n.o.s., (ethanol)  
IATA UN Number: UN1992  
IATA Hazard Class: 3  
IATA Packing Group: II  
IMDG UN Number : UN1992  
IMDG Shipping Name : Flammable liquids, toxic, n.o.s., (ethanol)  
IMDG Hazard Class : 3  
IMDG Packing Group : II  
RID UN Number : UN1992  
RID Shipping Name : Flammable liquids, toxic, n.o.s., (ethanol)  
RID Hazard Class : 3  
RID Packing Group : II

**SECTION 15 - REGULATORY INFORMATION**

Risk Phrases: R11 - Highly flammable.  
R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.  
Safety Phrase: S 2 - Keep out of the reach of children  
S 7 - Keep container tightly closed.  
S16 - Keep away from sources of ignition - No smoking.  
S24/25 - Avoid contact with skin and eyes.  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S37/39 - Wear suitable gloves and eye/face protection.

**Ethylene Glycol :**

TSCA Inventory Status: Listed  
Japan ENCS: (2)-230  
Section 313: Listed  
Canada IDL: Identified under the Canadian Hazardous Products Act Ingredient Disclosure List: 1%. Item: 716(860)  
EC Number: 203-473-3  
South Korea KECL: KE-13169  
Australia AICS: Listed

**Isopropanol :**

EINECS Number: 200-661-7  
EC Number: 200-661-7

**Ethanol :**

EINECS Number: 200-578-6  
EC Number: 200-578-6  
German: Water hazard class 1

<b>Label Hazard Warning:</b>	Flammable liquid and vapour Toxic if inhaled Toxic in contact with skin Toxic if swallowed Causes damage to organs
<b>HMIS Health Hazard:</b>	2
<b>HMIS Fire Hazard:</b>	3
<b>HMIS Reactivity:</b>	0
<b>HMIS Personal Protection:</b>	X
<b>MSDS Manufacturer Number:</b>	RD-01487 Rev.001
<b>MSDS Creation Date:</b>	June 15, 2011
<b>MSDS Revision Date:</b>	June 15, 2011
<b>Disclaimer:</b>	Information Note: Where no corresponding data was contained in manufacturer's SDS, additional research is required and available upon request. THE INFORMATION RELATES TO THIS SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY ONESELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OR HER OWN PARTICULAR USE.

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