

# SAFETY DATA SHEET

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

### 1.1 Product Identifier

Product Name: Histo-Clear

Product Number: HS-200

### 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

### 1.4 Emergency Telephone Number

**ChemTel Inc.**  
*Contract number MIS8894340*  
1-800 255-3924 (United States, Canada, Puerto Rico & US Virgin Islands)  
01-800-099-0731 (Mexico)  
400-120-0751 (China)  
000-800-100-4086 (India)  
1-300-954-583 (Australia)  
0-800-591-6042 (Brazil)  
+1-813-255-3924 (All other regions)

## SECTION 2 - HAZARDS IDENTIFICATION

### 2.1 Classification of the Substance or Mixture

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

H226 - Flammable Liquids (Category 3)  
H315 - Skin Corrosion/Irritation (Category 2)  
H317 - Skin Sensitizer (Category 1)  
H410 - Chronic Hazards to the Aquatic Environment (Category 1)

### 2.2 Label Elements

#### GHS LABEL ELEMENTS AND CLASSIFICATION

##### GHS Label Elements



##### DANGER

H226 - Flammable liquid and vapor.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H410 - Very toxic to aquatic life with long lasting effects.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician .  
P331 - Do NOT induce vomiting.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P333+P313 - IF SKIN irritation or rash occurs: Get medical advice/attention.  
P501 - Dispose of contents/containers to an approved waste disposal plant.

### 2.3 Other Hazards

None found.

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substance

#### Chemical Names/Description

Distilled essential oils - food grade

#### Chemical Formula

C<sub>10</sub>H<sub>16</sub>

#### Component List

Component	% Comp.	CAS #	EC #
d-limonene	95-100%	5989-27-5	227-813-5

## 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

Do not induce vomiting. If swallowed and the person is conscious, immediately give large amounts of water. Get medical attention.

#### 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

Remove contact lenses at once. 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

May include dizziness, headaches, and nasal irritation.

#### Ingestion

May include nausea, vomiting, and headache.

#### Skin

May include drying and redness (dermatitis) of the skin.

#### Eyes

May include redness, itching, and watering of the eyes.

### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

## SECTION 5 - FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

Dry powder, foam, carbon dioxide. (Water may be ineffective.)

### 5.2 Special Hazards Arising from the Substance/Mixture

#### Hazardous Combustion Products

Thermal decomposition products may include carbon monoxide, carbon dioxide, and hydrocarbons.

#### Hazardous Decomposition Products

Carbon monoxide and unidentified organic compounds may be formed during combustion.

#### 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

Eliminate source of ignition. Ventilate area. Cover with absorbent material (soda ash) to confine spill and sweep or shovel into container. Close container tightly.

### 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 away from sources of heat or ignition. Protect from physical damage. Isolate from incompatible materials.

#### Incompatibles

Avoid contact with strong acids, alkalis, or oxidizing 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

Local exhaust should be adequate.

#### Respiratory Protection

Not expected to require personal respirator usage, but if vapor concentration becomes high, use approved self-contained air mask.

#### 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

<b>a. Appearance</b>	Colorless, mobile liquid	<b>b. Odor</b>	Citrus odor
<b>c. Odor Threshold</b>	N.A.	<b>d. pH</b>	N.A.
<b>e. Melting/Freezing Point (°C)</b>	0	<b>f. Boiling point (°C)</b>	179
<b>g. Flash Point (°C)</b>	49	<b>h. Evaporation Rate</b>	0.2 (BuAc=1)
<b>i. Flammability</b>	Combustible	<b>j. Upper/Lower Flammability or Explosive Limits</b>	L.E.L 0.7%; U.E.L. 6.1%
<b>k. Vapor Pressure</b>	6.0 mm HG @ 25 C	<b>l. Vapor Density (Air = 1)</b>	4.94 (air = 1)
<b>m. Relative Density</b>	0.85 kg/L @ 25 C	<b>n. Water Solubility</b>	Insoluble
<b>o. Partition Coefficient n-octanol/water</b>	log Kow=4.38	<b>p. Autoignition Temperature (°C)</b>	N.A.
<b>q. Decomposition Temperature (°C)</b>	No decomposition if used according to specifications.	<b>r. Viscosity</b>	No data available.
<b>s. Explosive Properties</b>	No Data	<b>t. Oxidizing Properties</b>	No Data

## SECTION 10 - STABILITY AND REACTIVITY

### 10.1 Reactivity

Avoid contact with strong acids and strong oxidizing agents. Avoid heat and ignition conditions.

### 10.2 Chemical Stability

Stable under normal conditions of use. Incompatible with strong oxidizing agents.

### 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

Heat, sources of ignition.

### 10.5 Incompatible Materials

Avoid contact with strong acids, alkalis, or oxidizing agents.

### 10.6 Hazardous Decomposition Products

Carbon monoxide and unidentified organic compounds may be formed during combustion.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### Product LD50 Values

#### Oral Rat LD50 (mg/kg)

GRAS (Generally Regarded As Safe)

#### Dermal Rabbit LD50 (mg/kg)

GRAS (Generally Regarded As Safe)

### Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
d-limonene	No	No	None

### Potential Health Effects

#### Inhalation

Inhalation can cause nose, throat, and respiratory tract irritation. Prolonged exposure to high vapor or mist concentrations may cause dizziness, headaches, and nasal irritation.

#### Ingestion

Ingestion may cause vomiting, headache, and other medical problems.

#### Skin

Repeated or prolonged contact can cause redness, irritation, and scaling of the skin (dermatitis). Normal care and personal hygiene should prevent skin effects.

#### Eyes

Eye irritation may occur with exposure to concentrated vapors or contact with product.

### Carcinogenicity

None of the components of this material are listed by NTP, OSHA, ACGIH, or IARC as a carcinogen or a suspected carcinogen.

### Mutagenicity

No information available.

### Reproductive Toxicity

No information available.

### Teratogenic Effects

No information available.

### Routes of Entry

May be absorbed through the skin, by inhalation, or by ingestion.

### Target Organ Statement

No information available.

## SECTION 12 - ECOLOGICAL INFORMATION

### 12.1 Toxicity

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hr fathead minnco): 720ug/L	EC50 (48hrs, Daphnia) 0.36mg/L	EC50 (72hrs) 8mg/L	EC50 (3hr) 209mg/L

	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No Data	No Data	No Data	No Data

### 12.2 Persistence and Degradability

Readily biodegradable

### 12.3 Bioaccumulative Potential

BCF is 1022 L/kg (calculated)

### 12.4 Mobility in Soil

Koc of d-limonene (predicted): 1984 L/kg.

### 12.5 Results of PBT and vPvB Assessment

Not a PBT or vPvB

### 12.6 Other Adverse Effects

No data

## 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
<b>14.1 UN Number</b>	2319	2319	2319	N.A.
<b>14.2 Shipping Name</b>	Terpene Hydrocarbons, N.O.S. ( d-limonene )	Terpene Hydrocarbons, N.O.S. ( d-limonene )	Terpene Hydrocarbons, N.O.S. ( d-limonene )	Not regulated
<b>14.3 Hazard Class</b>	3	3	3	N.A.
<b>14.4 Packing Group</b>	III	III	III	N.A.
<b>14.5 Environmental Hazards</b>	N.A.	N.A.	Marine pollutant in excess of 5 kilograms/5 liters	N.A.
<b>14.6 Special Precautions</b>	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
d-limonene	Yes	No	No	Yes	No

##### Europe

##### EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

## SECTION 16 - OTHER INFORMATION

### Revisional Updates

8/8/2023 - Updated Section 14.5  
4/26/2019 - Updated Section 1.4  
5/29/2015 - Updated Sections 2.1 and 3.1  
8/12/2013 - Released Version 1.0

### NFPA Codes

Health 1 Flammability 2 Reactivity 0

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