1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Histo-Clear II
PRODUCT NUMBER: HS-202

CHEMICAL NAMES/DESCRIPTION: Mixture of alkyl hydrocarbons and essential oils

MANUFACTURER: National Diagnostics, Inc.
305 Patton Drive
Atlanta, GA 30336
(800) 526-3867
(404) 699-2121

TELEPHONE NUMBER:

EMERGENCY NUMBER:
CHEMTREC (800) 424-9300

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>% Comp</th>
<th>CAS #</th>
<th>EINECS #</th>
<th>TLV (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic Hydrocarbons</td>
<td>70 - 90</td>
<td>8042-47-5</td>
<td></td>
<td>300 ppm</td>
</tr>
<tr>
<td>d-limonene</td>
<td>10 - 30</td>
<td>5989-27-5</td>
<td>227-813-5</td>
<td></td>
</tr>
</tbody>
</table>

EEC LABEL SYMBOL AND CLASSIFICATION

R: 10-38-43-50/53
Flammable. Irritating to skin. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S: 2-24-37-60-61
Keep out of the reach of children. Avoid contact with skin. Wear suitable non-latex gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety data sheets.

3. HAZARDS IDENTIFICATION

APPEARANCE AND ODOR: Clear and colorless liquid

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

PRODUCT IS SLIGHTLY IRRITATING TO EYES (NO INJURY). HIGH VAPOR MAY CAUSE RESPIRATORY TRACT IRRITATION, HEADACHE, DIZZINESS, ANESTHESIA, DROWSINESS, UNCONSCIOUSNESS, OR DEATH.
INGESTION: MINIMAL TOXICITY. ASPIRATION MAY LEAD TO PULMONARY INJURY AND DEATH.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING

NO CHRONIC HAZARDS SUSPECTED.

POTENTIAL HEALTH EFFECTS

INHALATION
High vapor/aerosol concentrations (greater than approximately 1000 ppm) are irritating to the eyes and the respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.

INGESTION
Minimal toxicity by ingestion, though small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

SKIN
Low order or toxicity. Frequent or prolonged contact may irritate and cause dermatitis. Skin contact may aggravate an existing dermatitis condition.

EYES
Slightly irritating but does not injure eye tissue.
4. 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:
Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. FIRE FIGHTING MEASURES

FLASH POINT: 104 F
FLAMMABLE LIMITS: LEL 1.2%; UEL 9.6%
FLASH POINT METHOD: TCC
AUTOIGNITION TEMPERATURE: 559 F (approximate)

EXTINGUISHING MEDIA
Dry powder, foam, carbon dioxide. (Water may be ineffective.)
PROTECTIVE EQUIPMENT
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.

HAZARDOUS COMBUSTION PRODUCTS:
Thermal decomposition products may include carbon monoxide, carbon dioxide, and hydrocarbons.

UNUSUAL FIRE AND EXPLOSION HAZARDS
Flammable liquid. Vapor forms explosive mixtures with air. Vapor may travel considerable distances to ignition source and flash back.

NFPA CODES: Health: 1 Flammability: 2 Reactivity: 0

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Eliminate source of ignition. Ventilate area. Cover with absorbent material (soda ash) to confine spill and sweep or shovel into container. Close container tightly. Avoid breathing vapors.

WASTE DISPOSAL METHOD
Disposal must be made in accordance with applicable federal, state, and local regulations.

PERSONAL PRECAUTIONS
Wear appropriate protective equipment as specified in section 8.

7. HANDLING AND STORAGE

HANDLING
Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Transfer methods should avoid static sparks. Use explosion proof ventilation.

STORAGE
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.

STORAGE TEMPERATURE: Room Temperature

DISPOSAL
Observe all national, state, and local regulations regarding product disposal. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS:
Component: Aliphatic Hydrocarbons
ACGIH Threshold Limit Value (TLV): 300 ppm
OSHA Permissible Exposure Limit (PEL):

ENGINEERING CONTROLS
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborn Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

RESPIRATORY PROTECTION
If the exposure limit is exceeded, wear a supplied air, full-facepiece respirator, airlined hood, or full-facepiece self-contained breathing apparatus.

EYE PROTECTION
Safety glasses.

SKIN PROTECTION
Wear protective gloves and clean body covering clothing.
9. PHYSICAL PROPERTIES

**Boiling Point**: 325 - 360 F

**Melting Point**: Less than -68 F

**Vapor Pressure**: 2 mmHg @ 68 F

**Vapor Density**: 4.94

**% Volatile by Volume**: 100

**Evaporation Rate**: 0.3 (n-Bu Acetate = 1)

**Solubility in Water**: Less than 0.01% @77F

**pH**: N.A.

**Specific Gravity**: 0.75 @ 60 F

10. STABILITY AND REACTIVITY

**STABILITY**: Stable under normal conditions of use.

**CONDITIONS TO AVOID**

Heat, sources of ignition.

**HAZARDOUS DECOMPOSITION PRODUCTS**

None

**HAZARDOUS POLYMERIZATION**

Will not occur

**INCOMPATIBLES**

- **Aliphatic Hydrocarbons**: Strong oxidizing agents.
- **d-limonene**: Avoid contact with strong acids, alkalis, or oxidizing agents.

11. TOXICOLOGICAL INFORMATION

**PRODUCT LD50 VALUES**

- **Histo-Clear II**: Oral Rat LD50 (mg/kg): Minimal toxicity by ingestion.
- **Histo-Clear II**: Dermal Rabbit LD50 (mg/kg): Minimal toxicity by skin contact.

**COMPONENT CANCER LIST STATUS**

<table>
<thead>
<tr>
<th>Component</th>
<th>NTP Carcinogen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic Hydrocarbons</td>
<td>Known Anticipated IARC Category</td>
</tr>
<tr>
<td>d-limonene</td>
<td>No No None</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

- **Aliphatic Hydrocarbons**: No specific ecological data is available for this material. Please refer to Section 6 for information regarding accidental releases.
- **d-limonene**: No information available on the ecological fate of this material.

13. DISPOSAL CONSIDERATIONS

Observe all national, state, and local regulations regarding product disposal. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids).

14. TRANSPORT INFORMATION

**D.O.T.**
**Proper Shipping Name:** Petroleum Products N.O.S. (aliphatic and terpene hydrocarbons)

**Hazard Class:** 3  
**UN Number:** 1268  
**Packing Group:** III

**I.A.T.A.**

**Proper Shipping Name:** Petroleum Products N.O.S. (aliphatic and terpene hydrocarbons)

**Hazard Class:** 3  
**UN Number:** 1268  
**Packing Group:** III

**I.M.O.**

**Proper Shipping Name:** Petroleum Products N.O.S. (aliphatic and terpene hydrocarbons)

**Hazard Class:** 3  
**UN Number:** 1268  
**Packing Group:** III

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**15. REGULATORY INFORMATION**

**UNITED STATES**

**TSCA Regulatory:**
All intentional ingredients are listed on the TSCA Inventory.

**SARA 311/312 Hazard Categories**

<table>
<thead>
<tr>
<th>Component</th>
<th>Fire</th>
<th>Pressure</th>
<th>Reactivity</th>
<th>Acute</th>
<th>Chronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aliphatic Hydrocarbons</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>d-limonene</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**EUROPE**

**EEC Regulatory:**
All intentional ingredients are listed on the European EINECS Inventory.

**EEC LABEL SYMBOL AND CLASSIFICATION**

- **R:** 10-38-43-50/53  
  Flammable. Irritating to skin. May cause sensitization by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **S:** 2-24-37-60-61  
  Keep out of the reach of children. Avoid contact with skin. Wear suitable non-latex gloves. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety data sheets.

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**16. OTHER INFORMATION**

**NFPA CODES:** Health: 1  
Flammability: 2  
Reactivity: 0

**MANUFACTURER DISCLAIMER:** The information given herein is offered in good faith as accurate, but without guarantee. Conditions of 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.