

Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 regulations

Printing date: March 02, 2017

Revision: March 02, 2017

1 Identification

- **Product identifier**
- **Trade name:** Solution B, Hydroxyproline Assay Kit
- **Product code:** 60173
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** For Research Use Only – Not Human or Therapeutic Use
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
Chondrex, Inc.
16928 Woodinville-Redmond Rd NE Suite B-101
Woodinville, WA 98072
USA
425-702-6365
support@chondrex.com
- **Emergency telephone number:**
ChemTel LLC
800-255-3924 (North America)
(+1) 813-248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Ox. Liq. 2 H272 May intensify fire; oxidizer.
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
STOT SE 3 H336 May cause drowsiness or dizziness.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS02 GHS03 GHS05 GHS07
- **Signal word:** Danger
- **Hazard statements:**
H225 Highly flammable liquid and vapor.
H272 May intensify fire; oxidizer.
H314 Causes severe skin burns and eye damage.
H336 May cause drowsiness or dizziness.
- **Precautionary statements:**
P221 Take any precaution to avoid mixing with combustibles.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P260 Do not breathe mist/vapors/spray.

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P220	Keep/Store away from clothing/combustible materials.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection.
P233	Keep container tightly closed.
P243	Take precautionary measures against static discharge.
P271	Use only outdoors or in a well-ventilated area.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P363	Wash contaminated clothing before reuse.
P301+P330+P331	If swallowed: Rinse mouth. Do NOT induce vomiting.
P370+P378	In case of fire: Use for extinction: CO ₂ , powder or water spray.
P405	Store locked up.
P403+P235	Store in a well-ventilated place. Keep cool.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

67-63-0	propan-2-ol	 Flam. Liq. 2, H225  Eye Irrit. 2A, H319; STOT SE 3, H336	60-80%
7601-90-3	perchloric acid	 Flam. Liq. 3, H226  Ox. Liq. 1, H271  Skin Corr. 1A, H314	20-40%

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **After inhalation:**

Supply fresh air.

Provide oxygen treatment if affected person has difficulty breathing.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

· **After skin contact:**

Immediately remove any clothing soiled by the product.

Immediately rinse with water.

If skin irritation continues, consult a doctor.

Seek immediate medical help for blistering or open wounds.

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- **After eye contact:**
 - Protect unharmed eye.
 - Remove contact lenses if worn.
 - Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 - Rinse out mouth and then drink plenty of water.
 - Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
 - Dizziness
 - Coughing
 - Strong caustic effect on skin and mucous membranes.
- **Danger:**
 - Danger of gastric perforation.
 - Causes serious eye damage.
 - May cause drowsiness or dizziness.
 - Danger of circulatory collapse.
 - Affected organs: thyroid, hemapoetic system..
- **Indication of any immediate medical attention and special treatment needed:**
 - Medical supervision for at least 48 hours.
 - If necessary oxygen respiration treatment.
 - If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Water spray
 - Alcohol resistant foam
 - Gaseous extinguishing agents
- **For safety reasons unsuitable extinguishing agents:** None.
- **Special hazards arising from the substance or mixture**
 - During heating or in case of fire poisonous gases are produced.
 - Highly flammable liquid and vapor.
 - Contains oxidizing agent.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:** Eliminate all ignition sources if safe to do so.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
 - Wear protective equipment. Keep unprotected persons away.
 - Ensure adequate ventilation.
 - Keep away from ignition sources.

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Protect from heat.

Isolate area and prevent access.

· Environmental precautions

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Methods and material for containment and cleaning up

Use limestone to neutralize and absorb spill.

Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).

Take any precaution to avoid mixing with combustibles.

Send for recovery or disposal in suitable receptacles.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage**· Handling****· Precautions for safe handling:**

Open and handle receptacle with care.

Use only in well ventilated areas.

Keep away from heat and direct sunlight.

Handle with care. Avoid jolting, friction and impact.

Keep away from open flame or other ignition sources.

Avoid contact with the eyes and skin.

· Information about protection against explosions and fires:

Highly flammable liquid and vapor.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Flammable gas-air mixtures may be formed in empty containers/receptacles.

· Conditions for safe storage, including any incompatibilities**· Storage****· Requirements to be met by storerooms and receptacles:**

Store in a cool location.

Unsuitable material for receptacle: aluminium.

Unsuitable material for receptacle: steel.

Use only receptacles specifically permitted for this substance/product.

· Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from flammable substances.

Store away from oxidizing agents.

Store away from metals.

· Further information about storage conditions:

Keep containers tightly sealed.

Storage Temperatures : 35.6-46.4 °F / 2-8 °C.

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 · **Specific end use(s)** No relevant information available.

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8 Exposure controls/personal protection

 · **Control parameters**

 · **Components with limit values that require monitoring at the workplace:**
67-63-0 propan-2-ol

PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm
EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE

 · **Ingredients with biological limit values:**
67-63-0 propan-2-ol

BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
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 · **Exposure controls**

 · **Personal protective equipment:**

 · **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
 Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing.
 Wash hands before breaks and at the end of work.
 Avoid contact with the eyes and skin.

 · **Engineering controls:** Provide adequate ventilation.

 · **Breathing equipment:** Suitable respiratory protective device recommended.

 · **Protection of hands:**


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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· Eye protection:


Safety glasses

· Body protection: Protective work clothing

· Limitation and supervision of exposure into the environment

No relevant information available.

9 Physical and chemical properties
· Information on basic physical and chemical properties
· Appearance:

Form: Liquid
Color: Colorless

· Odor: Alcohol-like

· Odor threshold: Not determined.

· pH-value: Acidic

· Melting point/Melting range: Not determined.

· Boiling point/Boiling range: >35 °C (>95 °F) (Estimated)

· Flash point: <23 °C (<73 °F) (Estimated)

· Flammability (solid, gaseous): Not applicable.

· Auto-ignition temperature: Not determined.

· Decomposition temperature: Not determined.

· Danger of explosion: Risk of explosion if heated under confinement.

· Explosion limits

Lower: Not determined.

Upper: Not determined.

· Oxidizing properties: Oxidizer

· Vapor pressure: Not determined.

· Density:

Relative density: 1.01-1.05

Vapor density: Not determined.

Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Fully miscible.

· Partition coefficient (n-octanol/water): Not determined.

· Viscosity

Dynamic: Not determined.

Kinematic: Not determined.

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 · **Other information** No relevant information available.

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
 No decomposition if used and stored according to specifications.
 Avoid open flame, ignition sources, contact with incompatible substances.
- **Possibility of hazardous reactions**
 Highly flammable liquid and vapor.
 Reacts with oxidizing agents.
 Used empty containers may contain product gases which form explosive mixtures with air.
 Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
 Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid**
 Keep ignition sources away - Do not smoke.
 Store away from oxidizing agents.
- **Incompatible materials**
 Oxidizers
 Alkalis
- **Hazardous decomposition products**
 Carbon monoxide and carbon dioxide
 Chlorine compounds

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

67-63-0 propan-2-ol

Oral	LD50	5045 mg/kg (rat)
Dermal	LD50	12800 mg/kg (rabbit)
Inhalative	LC50/4h	30 mg/l (rat)

7601-90-3 perchloric acid

Oral	LD50	1100 mg/kg (rat)
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- **Primary irritant effect:**
- **On the skin:** Caustic effect on skin and mucous membranes.
- **On the eye:** Strong caustic effect.
- **Sensitization:** Based on available data, the classification criteria are not met.

- **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

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· NTP (National Toxicology Program):

None of the ingredients are listed.

· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

· Probable route(s) of exposure:

Ingestion.

Inhalation.

Eye contact.

Skin contact.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**· Germ cell mutagenicity:** Based on available data, the classification criteria are not met.**· Carcinogenicity:** Based on available data, the classification criteria are not met.**· Reproductive toxicity:** Based on available data, the classification criteria are not met.**· STOT-single exposure:** May cause drowsiness or dizziness.**· STOT-repeated exposure:** Based on available data, the classification criteria are not met.**· Aspiration hazard:** Based on available data, the classification criteria are not met.**12 Ecological information****· Toxicity****· Aquatic toxicity** No relevant information available.**· Persistence and degradability** No relevant information available.**· Bioaccumulative potential:** No relevant information available.**· Mobility in soil:** No relevant information available.**· Additional ecological information****· General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Results of PBT and vPvB assessment**· PBT:** Not applicable.**· vPvB:** Not applicable.**· Other adverse effects** No relevant information available.**13 Disposal considerations****· Waste treatment methods****· Recommendation:**

The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.

· Uncleaned packagings**· Recommendation:** Disposal must be made according to official regulations.

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 · **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

 · **UN-Number**

· DOT, ADR, IMDG, IATA

UN2924

 · **UN proper shipping name**

· DOT

Flammable liquids, corrosive, n.o.s. (Isopropanol, Perchloric acid)

· ADR, IMDG

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (ISOPROPANOL, PERCHLORIC ACID)

· IATA

Flammable liquid, corrosive, n.o.s. (Isopropanol, Perchloric acid)

 · **Transport hazard class(es)**

· DOT



· Class

3 Flammable liquids

· Label

3, 8

· ADR



· Class

3 (FC) Flammable liquids

· Label

3+8

· IMDG



· Class

3 Flammable liquids

· Label

3/8

· IATA



· Class

3 Flammable liquids

· Label

3 (8)

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- **Packing group**
- DOT, ADR, IMDG, IATA II
- **Environmental hazards**
- **Marine pollutant:** No
- **Special precautions for user** Warning: Flammable liquids
- **Danger code (Kemler):** 338
- **EMS Number:** F-E,S-C
- **Segregation groups** Acids, perchlorates

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

Transport/Additional information:


Excepted Quantities (EQ)
 EQ Code: E2
 Maximum net quantity per inner packaging: 30 mL
 Maximum net quantity per outer packaging: 500 mL

DOT


Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

ADR


Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

IMDG


Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

IATA


Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L net.

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15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **United States (USA)**
- **SARA**

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 355 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

67-63-0 | propan-2-ol

· TSCA (Toxic Substances Control Act)

All ingredients are listed.

· Proposition 65 (California)**· Chemicals known to cause cancer:**

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

· Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

· Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

· Carcinogenic categories**· EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health):

None of the ingredients are listed.

· Canadian Domestic Substances List (DSL):

All ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Date of preparation / last revision** March 02, 2017 / -

· Abbreviations and acronyms:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods

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DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Ox. Liq. 1: Oxidizing liquids – Category 1
Ox. Liq. 2: Oxidizing liquids – Category 2
Skin Corr. 1A: Skin corrosion/irritation – Category 1A
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources

Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor-internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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