SAFETY DATA SHEET

Article 1 – Product Identification

Product Name: HLVD One-Pot Standard Detection Kit **Catalog # HL02-K199**

This product is sold only for research use by qualified laboratory personnel, and is not to be used as a drug, medical device, food additive, cosmetic, nor household chemical. It is not to be used in diagnostic, therapeutic, consumer, agricultural, nor pesticidal applications.

Supplier of Datasheet:	SignalChem Diagnostics Inc.
Street Address:	*190-13160 Vanier Place*
City, Prov. Postal Code:	*Richmond, BC, V6V 2J2*
Country:	*Canada*
Phone Number:	1-888-606-3424 (Toll-free) 1-778-326-0223 (local)
Emergency Phone Number:	In case of an emergency contact your local poison control center
Canada:	1-844-764-7669
USA:	1-800-222-1222

Article 2 - Hazard Identification

Component: PCR tube strips with Master Mix

- **WHMIS Classification:** Not WHMIS controlled.
- **GHS classification:** Not GHS classified.
- **Hazard Pictograms:** No labelling applicable.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.
- **Other hazards:** None known.

Component: Lysis Buffer

- **WHMIS Classification:** Not WHMIS controlled.
- **GHS classification:** Not GHS classified.
- **Hazard Pictograms:** No labelling applicable.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.
- **Other hazards:** None known.

Component: Bead-Buffer Mix

- **WHMIS Classification:** Not WHMIS controlled.
- **GHS classification:** Not GHS classified.
- **Hazard Pictograms:** No labelling applicable.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.
- **Other hazards:** None known.

Component: Wash Buffer A

- **GHS classification:**

Acute toxicity, Oral (Category 4), H302
Skin corrosion/irritation (Category 2), H315
Serious eye damage/eye irritation (Category 1), H318
Short-term (acute) aquatic hazard (Category 3), H402



- **Hazard Pictograms:**
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.
- **Other hazards:** None known.

Component: Wash Buffer B

- **GHS classification:**
  Flammable liquids (Category 2), H225
  Eye irritation (Category 2A), H319
  Specific target organ toxicity - single exposure (Category 2), Eyes, Central nervous system, H371



- **Hazard Pictograms:**
- **Signal words:** Danger.
- **Hazard statements:**
  H225 Highly flammable liquid and vapor.
  H319 Causes serious eye irritation.
  H371 May cause damage to organs (Eyes, Central nervous system).
- **Precautionary statements:**
  P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
  P233 Keep container tightly closed.
  P240 Ground and bond container and receiving equipment.
  P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
  P242 Use non-sparking tools.
  P243 Take action to prevent static discharges.
  P264 Wash skin thoroughly after handling.
  P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
  P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
  P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P337 + P313 If eye irritation persists: Get medical advice/ attention.
  P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
  P403 + P235 Store in a well-ventilated place. Keep cool.
  P501 Dispose of contents/ container to an approved waste disposal plant.
- **Other hazards:** None known.

Component: Elution Buffer

- **WHMIS Classification:** Not WHMIS controlled.
- **GHS classification:** Not GHS classified.
- **Hazard Pictograms:** No labelling applicable.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.

- **Other hazards:** None known.

Component: Reaction Buffer

- **WHMIS Classification:** Not WHMIS controlled.
- **GHS classification:** Not GHS classified.
- **Hazard Pictograms:** No labelling applicable.
- **Signal words:** None.
- **Hazard statements:** None.
- **Precautionary statements:** None.
- **Other hazards:** None known.

Article 3 – Composition/Information on Ingredients

Component: PCR tube strips with Master Mix
Chemical Characterization: Mixture.
Description: This product no substances considered harmful to health at the given concentration.

Component: Lysis Buffer
Chemical Characterization: Mixture.
Description: This product contains the substances listed below along with other non-hazardous substances.

Common name	Chemical name	CAS-No.	Concentration (w/v)
EDTA	Ethylenediaminetetraacetic Acid	60-00-4	<0.5%
Potassium xanthogenate	Potassium Ethyl Xanthogenate	140-89-6	≤0.1%

Component: Bead-Buffer Mix
Chemical Characterization: Mixture.
Description: This product contains no substances considered harmful to health at the given concentration.

Component: Wash Buffer A
Chemical Characterization: Mixture.
Description: This product contains the substances listed below along with other non-hazardous substances.

Common name	Chemical name	CAS-No.	Concentration (w/v)
Guanidine thiocyanate	Guanidinium thiocyanate	593-84-0	5-15%
EDTA	Ethylenediaminetetraacetic Acid	60-00-4	<0.5%
Ethanol	Ethyl alcohol	64-17-5	40-60%

Component: Wash Buffer B
Chemical Characterization: Mixture.
Description: This product contains the substances listed below along with other non-hazardous substances.

Common name	Chemical name	CAS-No.	Concentration (w/v)
Ethanol	Ethyl alcohol	64-17-5	60-80%

Component: Elution Buffer
Chemical Characterization: Mixture.
Description: This product contains no substances considered harmful to health at the given concentration.

Component: Reaction Buffer
Chemical Characterization: Mixture.
Description: This product contains no substances considered harmful to health at the given concentration.

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Article 4 – First-aid Measures

- **General information:** Consult a physician by providing the SDS.
- **After inhalation:** In case of irritation by inhaling this product, move the affected person to fresh air and await recovery. If irritation persists, seek immediate medical attention. If the casualty cannot breathe, give artificial respiration and seek immediate medical attention.
- **After skin contact:** Rinse with plenty of water for at least 15 minutes. Consult a physician if any reaction occurs.
- **After eye contact:** Rinse open eyes with plenty of water for at least 15 minutes. Consult a physician.
- **After swallowing:** Rinse the mouth with plenty of water and consult a physician.

Article 5 - Fire-fighting Measures

- **Suitable extinguishing media:** Use water spray, carbon dioxide, extinguishing powder or foam.
- **Unsuitable extinguishing media:** No information available.
- **Specific hazards arising from the substance or mixture:** None known.
- **Special protective equipment and precautions for fire-fighters:** Self-contained breathing apparatus if necessary.

Article 6 – Accidental Release Measures

- **Personal precautions, protective equipment, and emergency procedures:** Apply standard laboratory practices and personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation.
- **Environmental precautions:** Do not allow to enter drains.
- **Methods and materials for containment and cleaning up:** Absorb via sand or vermiculite and place in closed containers for disposal.

Article 7 - Handling and Storage

- **Precautions for safe handling:** Wear chemical safety goggles and compatible chemical-resistant gloves. Avoid inhalation, and contact with eyes, skin, or clothing.
- **Conditions for safe storage:** Store according to product label instructions. Keep the container upright and tightly closed.

Article 8 - Exposure Controls/Personal Protection

- **Components with limit monitoring values at workplace:** N/A
- **Appropriate engineering controls:**
  Apply adequate ventilation including mechanical exhaust or laboratory fume hood. Follow standard laboratory practices.
- **Individual protection measures:**
  Respiratory protection:
  If ventilation is inadequate, use respirators and components that are tested and certified in compliance with applicable government standards.
  Hand protection:
  Wear gloves and use proper glove removal technique to avoid skin contact. Discard gloves after use by following the applicable laboratory regulations. Wash and dry hands.
  Eye/face protection:
  Safety goggles with side-shields tested and certified in compliance with applicable government standards.
  Skin/body protection:
  Use appropriate clothing, footwear and any additional protection measures to protect from splashes or contamination.

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Article 9 – Physical and Chemical Properties

Component: PCR tube strips with Master Mix

Physical state: Solid pellet	**Color:** White
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not determined.
Melting point/freezing point: Not determined.	**pH:** Not applicable.
Boiling point/Boiling range: Not determined.	**Viscosity:** Not applicable.
Flammability (solid, gaseous): Not determined.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not applicable.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not applicable.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not applicable.

Component: Lysis Buffer

Physical state: Liquid.	**Color:** Colorless.
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not applicable.
Melting point/freezing point: Not determined.	**pH:** Not determined.
Boiling point/Boiling range: Not determined.	**Viscosity:** Not determined.
Flammability (solid, gaseous): Not applicable.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not determined.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not determined.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not determined.

Component: Bead-Buffer Mix

Physical state: Liquid.	**Color:** Colorless solution with brown pellet at bottom of tube
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not applicable.
Melting point/freezing point: Not determined.	**pH:** 6-8
Boiling point/Boiling range: Not determined.	**Viscosity:** Not determined.
Flammability (solid, gaseous): Not applicable.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not determined.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not determined.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not determined.

Component: Wash Buffer A

Physical state: Liquid.	**Color:** Colorless.
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not applicable.
Melting point/freezing point: Not determined.	**pH:** Not determined.
Boiling point/Boiling range: Not determined.	**Viscosity:** Not determined.
Flammability (solid, gaseous): Not applicable.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not determined.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not determined.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not determined.

Component: Wash Buffer B

Physical state: Liquid.	**Color:** Colorless.
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not applicable.

Melting point/freezing point: Not determined.	**pH:** Not determined.
Boiling point/Boiling range: Not determined.	**Viscosity:** Not determined.
Flammability (solid, gaseous): Not applicable.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not determined.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not determined.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not determined.

Component: Elution Buffer

Physical state: Liquid.	**Color:** Colorless.
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not applicable.
Melting point/freezing point: Not determined.	**pH:** Not determined.
Boiling point/Boiling range: Not determined.	**Viscosity:** Not determined.
Flammability (solid, gaseous): Not applicable.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not determined.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not determined.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not determined.

Component: Reaction Buffer

Physical state: Liquid.	**Color:** Colorless.
Odour/Odour Threshold: Not determined.	**Particle characteristics:** Not applicable.
Melting point/freezing point: Not determined.	**pH:** Not determined.
Boiling point/Boiling range: Not determined.	**Viscosity:** Not determined.
Flammability (solid, gaseous): Not applicable.	**Solubility:** Fully miscible in water.
Explosion/Flammability limits: Not determined.	**Partition coefficient n-octanol/water:** Not determined.
Flash point: Not determined.	**Vapor pressure at 20 °C:** Not determined.
Auto-Ignition temperature: Not determined.	**Density/relative density:** Not determined.
Decomposition temperature: Not determined.	**Relative vapor density:** Not determined.

Article 10 - Stability and Reactivity

- **Reactivity:** Stable under recommended transport and storage conditions.
- **Chemical stability:** Stable under recommended transport and storage conditions.
- **Possible hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** Heat and moisture.
- **Incompatible materials:** Strong acids/bases, strong oxidizing/reducing agents.
- **Hazardous decomposition products:** Carbon oxides may be formed under fire conditions; no known decomposition information for other decomposition products.

Article 11 - Toxicological Information

- **Acute toxicity:** Not available.
- **LD/LC50:** Not available.
- **Skin corrosion/irritation:** Not available.
- **Serious eye damage/eye irritation:** Not available.
- **Respiratory or skin sensitization:** Not available.
- **Germ cell mutagenicity:** Not available.

- **Carcinogenicity:** No components are listed in IARC, or NTP, or OSHA, or ACGIH.
- **Reproductive toxicity:** Not available.
- **Teratogenicity:** Not available.
- **Specific target organ toxicity - single exposure/ - repeated exposure (GHS):** Not available.
- **Aspiration hazard:** Not available.
- **Potential routes of exposure:**
  Inhalation: May be harmful if inhaled.
  Ingestion: May be harmful if swallowed.
  Skin: Not available.
  Eyes: Not available.
- **Signs and Symptoms of Exposure:** Not available.
- **Synergistic effects:** Not available.

Article 12 - Ecological Information

- **Eco-toxicity:** No data available.
- **Biodegradability:** No data available.
- **Bio-accumulative potential:** No data available.
- **Mobility in soil:** No data available.
- **PBT and vPvB assessment:** No data available.
- **Other adverse effects:** No data available.

Article 13 - Disposal Considerations

- **Disposal methods:** Dispose in accordance with applicable national, regional, or local laws and regulations. For additional handling information and protection of employees please refer to Article 7 and 8.
- **Contaminated packaging:** Dispose in accordance with applicable national, regional, or local laws and regulations. Use water or cleansing agents to clean the area.

Article 14 - Transport Information

- **DOT:** Not dangerous goods.
- **IMDG:** Not dangerous goods.
- **IATA:** Not dangerous goods.
- **UN number:** Not applicable.
- **UN proper shipping name:** Not applicable.
- **Transport hazard class:** Not applicable.
- **Packing group:** Not applicable.
- **Environmental hazards:** Not applicable.
- **Transport in bulk according to IMO instruments:** Not applicable.
- **Special precautions for user:** Not applicable.

Article 15 – Regulatory Information

- **Canada Federal Regulations:** This product has been classified in accordance with the hazard criteria of the Hazardous products Regulations (HPR) and the SDS contains all the information required by the HPR.

- **European Union Regulations:** This product contains components in the final product and is regulated by REACH and should not be imported more than 1 ton/ year.

Article 16 - Other Information

- **Version #:** 1.0
- **Issued date:** 2025-07-21

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SignalChem shall not be held liable for any damage resulting from handling or from contact with the above product. See the Technical Specification, Packing Slip, Invoice, and Product Catalog for additional terms and conditions of sale.