SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier
- **Product Name**: RNAscope® VS Universal Target Retrieval v2
- **Product No**: 323741

1.2 Relevant identified uses of the substance or mixture and uses advised against
- **Identified uses**: For Research Use Only. Not for use in diagnostic procedures.

1.3 Details of the supplier of the safety data sheet
- **Company**: Advanced Cell Diagnostics
- **Telephone**: +1 510-576-8800
- **Fax**: +1 510-576-8798
- **Internet**: www.acdbio.com
- **Email address**: info.acd@bio-techne.com
- **Canada**: 21 Canmotor Avenue, Toronto, Ontario M8Z4E6
  - **Telephone**: +1 855-668-8722
  - **Fax**: +1 905-827-6402
  - **Email address**: Canada.inquiries@bio-techne.com
- **United Kingdom**: 19 Barton Lane, Abingdon Science Park, Abingdon, OX14 3NB
  - **Telephone**: +44 (0)1235 529449
  - **Fax**: +44 (0)1235 533420
  - **Email address**: info.emea@bio-techne.com
- **China**: 1193 Changning Road, Unit 1901, Raffles Changning, Shanghai, China
  - **Telephone**: +86 400-821-3475
  - **Fax**: +86 (021)52371001
  - **Email address**: techsupport.cn@bio-techne.com

1.4 Emergency Telephone Number
- **Emergency Tel**: For chemical emergency, spill, leak, fire, exposure, or accident call CHEMTREC day or night:
  - **Within U.S.**: 1-800-424-9300
  - **Worldwide**: +1 703-527-3887
- **Bio-Techne Tel**: US: +1 612 379-2956 or +1 800-343-7475 / Europe: +44 (0)1235-529449 / China +86 400-821-3475

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
- This substance does not meet the classification criteria of the EC Directives 1272/2008 [GHS/CLP], (EU) 878/2020, or 29 CFR 1910.1200 [OSHA].

2.2 Label elements
- This product does not need to be labeled in accordance with EC directives or respective national laws.

2.3 Other Hazards
- None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances
- Not applicable

3.2 Mixtures
- This product does not contain hazardous chemicals at concentrations of 1% or greater. This product is not known to contain carcinogens at concentrations of 0.1% or greater.

SECTION 4: FIRST AID AND MEASURES

4.1 Description of first aid measures
- **General Advice**: Consult a doctor and show this safety data sheet.
- **If Inhaled**: Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
In Case of Skin Contact
Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

Eye Contact
Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

If Swallowed
Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed.
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of any immediate medical attention and special treatment needed.
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media
This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

5.2 Special hazards arising from the substance or mixture
Hazardous combustion products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

5.3 Advice for fire fighters
Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Do not act without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

6.2 Environmental Precautions
Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up
Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

6.4 Reference to other sections
Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid spilling, skin and eye contact.

7.2 Conditions for safe storage, including any incompatibilities
Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

7.3 Specific end user(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters
Ingredient Comments
No exposure limits noted for ingredient(s).

8.2 Exposure controls
Protective equipment
**Engineering measures**
Provide adequate general and local exhaust ventilation.

**Respiratory Equipment**
No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

**Hand Protection**
Use suitable protective gloves if risk of skin contact.

**Eye Protection**
If risk of splashing, wear safety goggles or face shield.

**Skin Protection**
Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

**Other Protection**
Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures**
DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using, do not eat, drink or smoke.

---

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid or solid</td>
</tr>
<tr>
<td>Odor</td>
<td>Little to none</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point / Range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/Lower Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>or Explosive Limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**SECTION 10: STABILITY AND REACTIVITY**

**10.1 Reactivity**
No specific reactivity hazards associated with this product.

**10.2 Chemical stability**
Stable under normal temperature conditions and recommended use.

**10.3 Possibility of hazardous reactions**
Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

**10.4 Conditions to avoid.**
Heat, moisture.

**10.5 Incompatible Materials**
Strong acids/alkalis, strong oxidizing/reducing agents.

**10.6 Hazardous decomposition products**
Strong acids/alkalis, strong oxidizing/reducing agents.

---

**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute Toxicity**
Classified based on available data.
Skin Corrosion / Irritation  
Classified based on available data.

Serious Eye Damage/Irritation  
Classified based on available data.

Cell Mutagenicity  
Classified based on available data.

Carcinogenicity  
Classified based on available data.

Reproductive Toxicity  
Classified based on available data.

Specific Target Organ Toxicity – Single Exposure  
Classified based on available data.

Specific Target Organ Toxicity – Repeated Exposure  
Classified based on available data.

Aspiration Hazard  
Classified based on available data.

Symptoms/Routes of Exposure

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Ingestion: There may be irritation of the throat.

Skin: There may be mild irritation at the site of contact.

Eyes: There may be irritation and redness.

Delayed/Immediate Effects: No known symptoms.

Additional Information  
Classified based on available data.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity  
No data available

12.2 Persistence and degradability  
No data available

12.3 Bioaccumulative potential  
No data available on bioaccumulation

12.4 Mobility in soil  
No data available

12.5 Results of PBT and vPvB assessment  
No data available

12.6 Endocrine disrupting properties  
No data available

12.7 Other adverse effects  
No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product  
Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging  
Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

SECTION 14: TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA

14.1 UN Number  
Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name

CONFIDENTIAL & PROPRIETARY ADVANCED CELL DIAGNOSTICS  
SDS 323741/Rev B/Effective 2023/12/06

FRM 05-169 SDS Template for Non-Hazardous/Rev E/Effective Date: 04/19/2023
Does not meet the criteria for classification as hazardous for transport.

14.3 **Transport hazard class(es)**
Does not meet the criteria for classification as hazardous for transport.

14.4 **Packing group**
Does not meet the criteria for classification as hazardous for transport.

14.5 **Environmental hazards**
Does not meet the criteria for classification as hazardous for transport.

14.6 **Special precautions for user**
Does not meet the criteria for classification as hazardous for transport.

14.7 **Maritime transport in bulk according to IMO instruments**
Not applicable.

### SECTION 15: REGULATORY INFORMATION
This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

15.1 **Safety, health, and environmental regulations/legislation specific for the substance or mixture**

Statutory Instruments
- **TSCA (Toxic Substances Control Act):** Not applicable.
- **SARA 313:** Not applicable.
- **SARA 311/312:** Not applicable.
- **CERCLA Reportable Quantity:** Not applicable.
- **California Proposition 65:** Not applicable

15.2 **Chemical Safety Assessment**
A Chemical Safety Assessment has not been made for this product.

### SECTION 16: OTHER INFORMATION

**Further Information**

Copyright © 2023 ACD, a Bio-Techne Brand

This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet