SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Adenosine Deaminase Activity Assay Kit (Colorimetric)

PRODUCT CODES: Cat# K321-100

MANUFACTURER: BioVision, Inc.

DIVISION:
ADDRESS: 155 S. Milpitas Boulevard, Milpitas, CA 95035

EMERGENCY PHONE: 858-373-8066
CHEMTREC PHONE: 800-424-9300
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801

SECTION 2: HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
<th>Volume</th>
<th>Safety Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA Assay Buffer (10x)</td>
<td>Proprietary Buffer (contains NP-40 &gt;=1%)</td>
<td>25 ml</td>
<td>See below</td>
</tr>
<tr>
<td>ADA Convertor</td>
<td>Lyophilized</td>
<td>1 Vial</td>
<td>No Hazards</td>
</tr>
<tr>
<td>ADA Developer</td>
<td>Lyophilized</td>
<td>1 Vial</td>
<td>No Hazards</td>
</tr>
<tr>
<td>ADA Substrate</td>
<td>Liquid</td>
<td>500 µl</td>
<td>No Hazards</td>
</tr>
<tr>
<td>ADA Positive Control</td>
<td>Lyophilized</td>
<td>1 Vial</td>
<td>No Hazards</td>
</tr>
<tr>
<td>Inosine Standard (10 mM)</td>
<td>Liquid</td>
<td>100 µl</td>
<td>No Hazards</td>
</tr>
<tr>
<td>U.V. transparent plate (96-well)</td>
<td>--</td>
<td>--</td>
<td>No Hazards</td>
</tr>
</tbody>
</table>

NP-40:
Emergency Overview
GHS Classification: Acute toxicity, Oral (Category 4)
Skin irritation (Category 3)

GHS Label elements, including precautionary statements
Pictogram:

Signal word: Warning
Hazard statement(s): H319 Causes serious eye irritation
Precautionary statement(s): P280 Wear protective gloves/ eye protection/ face protection.
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 or doctor/ physician.

HMIS Classification
Health hazard: 1
Flammability: 0
Physical hazards: 0

NFPA Rating
Health Hazard: 1
Fire: 0
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. Causes respiratory tract irritation.
Skin: Harmful if absorbed through skin. Causes skin irritation.
Eyes: Causes eye irritation.
Ingestion: Harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>EC-No.</th>
<th>Molecular Weight</th>
<th>Chemical Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP-40</td>
<td>9016-45-9</td>
<td>500-024-6</td>
<td>680.0</td>
<td>--</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
Cat# K321-100 Adenosine Deaminase Activity Assay Kit (Colorimetric)

SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing during transport to hospital.

If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

Condition of flammability: Not flammable or combustible.

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Hazardous combustion products: Hazardous combustion products formed under fire conditions—no data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of vapor or mist. Avoid contact with skin and eyes.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: -20 °C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

NP-40:

Personal protective equipment
Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>NP-40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH:</td>
<td>6 at 10 g/l</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>No data available</td>
</tr>
<tr>
<td>Other Solubility:</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point (°C):</td>
<td>57-58 °C (135-136 °F)</td>
</tr>
<tr>
<td>Flash Point (°C):</td>
<td>113 °C (235 °F)</td>
</tr>
<tr>
<td>Ignition Temperature (°C):</td>
<td>No data available</td>
</tr>
<tr>
<td>Density:</td>
<td>1.06 g/ml at 20 °C (68 °F)</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
Cat# K321-100 Adenosine Deaminase Activity Assay Kit (Colorimetric)

SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>NP-40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Not data available</td>
</tr>
<tr>
<td>Materials to avoid</td>
<td>Strong oxidizing agents</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

NP-40:
- **Acute toxicity:** no data available
- **Skin corrosion/irritation:** Skin – rabbit – mild skin irritation.
- **Serious eye damage/eye irritation:** Eyes – rabbit – severe eye irritation.
- **Respiratory or skin sensitization:** Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.
- **Germ cell mutagenicity:** no data available
- **Carcinogenicity:**
  - IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
  - ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
  - NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
  - OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
- **Reproductive toxicity:** no data available
- **Teratogenicity:** no data available
- **Specific target organ toxicity – single exposure (GHS):** Inhalation – may cause respiratory irritation.
- **Specific target organ toxicity – repeated exposure (GHS):** no data available
- **Aspiration hazard:** no data available

**Potential Health Effects**
- **Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.
- **Skin:** Harmful if absorbed through skin. Causes skin irritation.
- **Eyes:** Causes eye irritation.
- **Ingestion:** Harmful if swallowed.

**Signs and Symptoms of Exposure:** Exposure may cause nausea, headache, and/or vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Synergistic effects:** no data available

**Additional information:** RTECS: AX0247000

SECTION 12: ECOLOGICAL INFORMATION

NP-40:
- **Persistence and degradability:** Biodegradability → Result: 86% - readily biodegradable; Method: modified Sturm test
- **Toxicity:**
  - **Toxicity to fish:** mortality LOEC – Pimephales promelas (fathead minnow) – 2.0 mg/l – 144 h
  - **Mortality LOEC – Pimephales promelas (fathead minnow):** 1.8 mg/l – 144 h
  - **LC50 – Lepomis macrochirus (Bluegill):** 1.0-9.7 mg/l – 96 h
  - **Toxicity to daphnia and other aquatic invertebrates:** mortality LOEC 0 Daphnia magna (water flea) – 10.0 mg/l – 144 h
  - **EC50 - Daphnia magna (water flea):** 20.0 mg/l – 144 h
  - **Toxicity to algae:** Growth inhibition LOEC – Pseudokirchneriella subcapitata – 16.0 mg/l – 96 h
  - **Growth inhibition LOEC – Pseudokirchneriella subcapitata:** 8.0 mg/l – 96 h
- **Bioaccumulative potential:** Does not bioaccumulate
- **Mobility in soil:** no data available
- **PBT and vPvB assessment:** no data available
- **Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
  - Very toxic to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated packaging:** Dispose of as unused product.
**SECTION 14: TRANSPORT INFORMATION**

NP-40:

**DOT (US):** Not dangerous goods.

**IMDG:** UN-number: 3082, Class: 9; Packing group: III; EMS-No. F-A, S-F; Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (4-Nonylphenyl-polyethylene glycol); Marine pollutant: Yes

**IATA:** UN-number: 3082, Class: 9; Packing group: III; Proper shipping name: Environmentally hazardous substance, liquid, n.o.s. (4-Nonylphenyl-polyethylene glycol)

**Further information:** EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packaging and combination packaging containing inner packaging with Dangerous Goods > 5L for liquids or >5 kg for solids.

**SECTION 15: REGULATORY INFORMATION**

**SARA 302 Components:** SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

**SARA 311/312 Hazards:** NP-40: Acute Health Hazard

**Massachusetts Right To Know Components:** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components:** NP-40, CAS-No. 9016-45-9

**New Jersey Right To Know Components:** NP-40, CAS-No. 9016-45-9

**California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**EU regulations:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Risk Phrases</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP-40</td>
<td>R22, R37/38, R41, R50</td>
<td>S23, S29, S36/37/39, S45, S56, S61</td>
</tr>
</tbody>
</table>

**SECTION 16: OTHER INFORMATION**

**DISCLAIMER:**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.