SAFETY DATA SHEET
RNAscope® Green-A
According to Regulation (EC) No 1907/2006

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

1.1 Product Identifier
Product Name   RNAscope® Green-A
Product No    320718

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

1.3 Details of the supplier of the safety data sheet
Supplier    Advanced Cell Diagnostics
7707 Gateway Blvd.
Newark, CA 94560
Tel: (510) 576-8800

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification (EC 1272/2008)
Physical and Chemical          Flam.Liq.2, Acute Tox. 3, Acute Tox. 3,
                                Acute Tox 3. STOT SE 1
Human health                    Skin Corr. 1A H314
Environment                     Not classified

Classification (1999/45/EEC) Not classified
The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2 Label elements
Contains    Methanol
Hydrogen peroxide….%
Label In Accordance with (EC) No. 1272/2008

Signal word   Danger
H225    Highly flammable liquid and vapour.
H301+H311+H331   Toxic if swallowed, if in contact with skin or inhaled.
H370   Causes damage to organs.

Precautionary Statements
P210   Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233   Keep container tightly closed.
P240   Ground/bond container and receiving equipment.
P241   Use explosion proof electrical/ventilating/lighting equipment
P242   Use only non-sparking tools.
P243   Take precautionary measures against static discharge.
P260   Do not breathe dust/fume/gas/mist/vapour/spray.
P270   Do not eat, drink or smoke while using this product.
P271   Use only outdoors or in a well ventilated area.
P301+P310   IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330   Rinse Mouth.
P304+P340   IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312   Call a POISON CENTER or a doctor/physician.
RNAscope® Green-A

P307+P311 IF EXPOSED: Call a POISON CENTER or a doctor/physician
P280 Wear protective gloves/protective clothing/face protection/eye protection
P303+P361+P353 IF ON SKIN: Wash with plenty of soap and water

Supplemental label information
RCH002 Restricted to professional users.

2.3 Other Hazards
Not classified as PBT/vPvB by current EU criteria.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS-No:</th>
<th>EC No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>200-659-6</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>7722-84-1</td>
<td>231-765-0</td>
</tr>
</tbody>
</table>

The full text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID AND MEASURES

General information
First aider: Pay attention to self protection! Move victim out of danger zone. Symptoms of poisoning may develop several hours following exposure. Victim should be under medical observation for at least 48 hours after exposure

4.1 Description of first aid measures

Inhalation
Provide fresh air. In case of breathing difficulties administer oxygen. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

Ingestion
Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately.

Skin Contact
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Call physician immediately.

Eye Contact
In case of contact with eyes, rinse immediately with plenty of water and seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Drowsiness
Headache
Dizziness
Eye defects
Spasms
Nausea
Vomiting
Unconsciousness

4.3 Indication of any immediate medical attention and special treatment needed.
No special measures are necessary.
SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable Extinguishing Media

Extinguishing media which must not be used for safety reasons
High-power water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
Vapours may form explosive mixtures with air.

5.3 Advice for fire fighters

Special Fire Fighting Procedures
Wear a self-contained breathing apparatus and chemical protective clothing. Full protective suit.
Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Provide adequate ventilation.
Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.
Wear personal protection equipment.

6.2 Environmental Precautions

Do not allow uncontrolled discharge of product into the environment.
Explosion hazard.

6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

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

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray. Handle and open container with care.

Precautions for protection against fire and explosion

Keep away from sources of ignition. No smoking. Take measures against static discharge. Vapours may form explosive mixtures with air.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.
Provide adequate ventilation as well as local exhaust at critical locations. Keep in a cool, well-ventilated place.
Keep away from sources of ignition. No smoking.

Storage compatibility

Do not store together with: material, rich in oxygen, oxidizing. Keep only in the original container in a cool well-ventilated place.
Store tightly closed, in the original vessel at temperatures between 2 – 8 °C.

7.3 Specific end user(s)

This product is intended for professional use.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Exposure limits (EH40)

<table>
<thead>
<tr>
<th>Name</th>
<th>STD</th>
<th>TWA 8 Hrs</th>
<th>STEL – 15 min</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide</td>
<td>1 ppm</td>
<td>1.4 mg/m³</td>
<td>2 ppm</td>
<td>WEL</td>
</tr>
<tr>
<td>Methanol</td>
<td>200 ppm</td>
<td>266 mg/m³</td>
<td>250 ppm</td>
<td>WEL</td>
</tr>
</tbody>
</table>

WEL = Workplace Exposure Limits

8.2 Exposure controls

Protective equipment

**Engineering measures**
- If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Respiratory Equipment**
- Provide fresh air.

**Hand Protection**
- Wear suitable gloves.

**Eye Protection**
- Tightly sealed safety glasses

**Other Protection**
- Wear suitable protective clothing.

**Hygiene measures**
- Remove contaminated, saturated clothing immediately. Protect skin by using skin protective cream. After work, wash hands and face. When using, do not eat or drink.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- **Appearance**: Liquid
- **Colour**: Yellow-orange
- **Odour**: Characteristic

9.2 Other information

Not determined

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Product has not been tested.

10.2 Chemical stability

If stored correctly, the product is stable at least until the expiry date printed on the label.

10.3 Possibility of hazardous reactions

Product has not been tested.

10.4 Conditions to avoid

- Keep away from heat. Non-normal temperature conditions

10.5 Incompatible Materials

Product has not been tested.

10.6 Hazardous decomposition products

Product was not tested.
SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Exposure routes</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>oral</td>
<td>LD50</td>
<td>5628 mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>15800 mg/kg</td>
<td>Rabbit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative (4 h) vapour</td>
<td>LC50</td>
<td>85.3 mg/L</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative aerosol</td>
<td>ATE</td>
<td>0.5 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen peroxide solution 30%</td>
<td>oral</td>
<td>LD50</td>
<td>418-445 mg/kg</td>
<td>Rat</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dermal</td>
<td>LD50</td>
<td>3000 mg/kg</td>
<td>Rat</td>
<td>GESTIS</td>
</tr>
<tr>
<td></td>
<td>inhalative (4 h) vapour</td>
<td>ATE</td>
<td>11 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>inhalative aerosol</td>
<td>ATE</td>
<td>1.5 mg/L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional information on tests
The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity
There are no data on the ecotoxicity of this product.

12.1 Toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Aquatic toxicity</th>
<th>Method</th>
<th>Dose</th>
<th>Species</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen peroxide solution 30%</td>
<td>Acute fix toxicity</td>
<td>LC50</td>
<td>16.4 mg/L</td>
<td>96 Pimephales promelas</td>
<td>IUCLID</td>
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<tr>
<td></td>
<td></td>
<td>ErC50</td>
<td>0.88 mg/L</td>
<td>72 Chlorella vulgaris</td>
<td></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
Degradability
No data available

12.3 Bioaccumulative potential
Bioaccumulative potential
No data available

12.4 Mobility in soil
Mobility
No data available
Surface Tension
No data available

12.5 Results of PBT and vPvB assessment
Not applicable

12.6 Other adverse effects
Do not allow to enter into surface water or drains. The classification was carried out according to the calculation method of the Preparations Directive (1999/45/EC).

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Disposal should be in accordance with applicable national, state and local regulations. Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: TRANSPORT INFORMATION

14.1 UN Number
Not applicable

14.2 UN proper shipping name
Not applicable

14.3 Transport hazard class(es)
Not applicable
14.4 Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant
Dangerous for the environment

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No dangerous good in sense of these transport regulations

SECTION 15: REGULATORY INFORMATION

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

Environmental Listing
National regulatory information
Water contaminating class (D): 2-water contaminating

SECTION 16: OTHER INFORMATION

SDS No. Version 01
Date June 2015

Risk Phrases in Full
R05 Heating may cause an explosion
R08 Contact with combustible material may cause fire.
R11 Highly Flammable
R20/22 Harmful by inhalation and if swallowed
R23/24/25 Toxic by inhalation, in contact with skin and swallowed
R35 Causes severe burns
R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed

Hazard Statements in Full
H225 Highly flammable liquid and vapour
H271 May cause fire or explosion; strong oxidizer
H301 Toxic if swallowed
H302 Harmful if swallowed
H311 Toxic in contact with skin
H314 Causes skin irritation
H331 Toxic if inhaled
H332 Harmful if inhaled
H370 Causes damage to organs

Disclaimer

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company’s knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user’s responsibility to satisfy himself as to the suitability of such information for his own particular use.