



ONRAB® "Ultralite" Bait

Material Safety Data Sheet

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Rabies Vaccine, Live Adenovirus Vector, Wildlife Bait

Trade Name: ONRAB® Ultralite Bait

Manufacturer: Artemis Technologies Inc.
51 Watson Road South,
Guelph, Ontario. N1L 1E3

Emergency Telephone No. 1 888 574 6656 Alternate Telephone Number: 1 519 826 5722

Product use: This product contains a vaccine for use in animals as an aid in the prevention of rabies.

2. HAZARDS IDENTIFICATION

Emergency Overview: The bait consists of a Polyvinyl chloride (PVC) blister pack covered with a sweet smelling dark green waxy coating; the dark green lid has a label printed in black.

Handling this product in its final form presents minimal risk of occupational exposure. An intact bait does not present a hazard and should be left undisturbed. If the bait must be handled wear gloves and wash hands thoroughly with soap and water.

Direct contact with the vaccine should be avoided. If the blister pack is leaking (colourless liquid) wear liquid impervious gloves and wash hands thoroughly with soap and water. Place leaking blister in a plastic bag, seal and dispose of as per Section 13 or place leaking blister in a plastic bag cover the leaking blister with 1:10 dilution of household bleach, seal and dispose of in regular household garbage.

Potential Health Effects: *Potentially hazardous to health if any of the following should occur: Ingestion, parenteral inoculation, droplet or aerosol exposure of mucous membranes or if broken skin is exposed to vaccine fluids. Young children, pregnant women, individuals with immune deficiencies or those on steroids should avoid contact with the vaccine fluids.*

Primary Routes of Exposure: Skin contact, eye contact & ingestion.

Inhalation: Not an expected route of entry.

Skin Contact: Not expected to be a hazard to intact skin. Exposure of broken skin to the vaccine may result in fever, sore throat, and headache.

Eye Contact: Not expected to be a hazard to the eye with prescribed use. Exposure of the eye to the vaccine may result in adenovirus conjunctivitis, possible fever, sore throat, and headache.

Ingestion: Not expected to be an ingestion hazard with prescribed use. Exposure of the mucous membranes to the vaccine may result in fever, sore throat, and headache.

Effects of long term exposure: May cause skin sensitization.

2.1 Additional Information:

The toxicological properties of this material have not been characterized therefore appropriate practices should be used to minimize the potential for inhalation exposure, skin contact, eye contact or ingestion.

ONRAB® "Ultralite" Bait

Material Safety Data Sheet

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Coating on the outside of the bait.

The coating is composed of non hazardous food grade components but contains tetracycline hydrochloride which may cause an allergic reaction in some people if ingested.

Ingredient	CAS#	Concentration (%)	Acute toxicity LD ₅₀
Tetracycline hydrochloride	64-75-5	≈5	Oral – rat 6443mg/kg

3.2 Vaccine contained inside the bait.

The vaccine consists of cell culture medium (essentially saline) containing a live, gene deleted, Adenovirus type 5 which expresses the rabies glycoprotein. The vaccine also contains the antibiotics Polymyxin B sulphate and Neomycin sulphate.

Ingredient	CAS#	Concentration (%)	Acute toxicity LD ₅₀
Polymyxin B sulphate	1405-20-5	<0.0001	Oral – mouse 790mg/kg
Neomycin sulphate	1405-10-3	<0.0001	Oral – mouse >8g/kg

3.3 Additional Information:

This MSDS is written to provide health and safety information for individuals who will be handling the final product during manufacture, research and distribution. For health and safety information for individual components refer to the appropriate MSDS for each component.

4. FIRST AID MEASURES

Inhalation:	Physical form suggests that risk of inhalation exposure is negligible.
Skin Contact:	Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Immediately wash exposed area thoroughly with lukewarm, gently flowing water and non-abrasive soap. If skin irritation or a rash occurs, see a doctor. Thoroughly clean clothing, shoes and leather goods before reuse or dispose of safely.
Eye Contact:	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If a contact lens is present, DO NOT delay flushing or attempt to remove the lens. Take care not to rinse contaminated water into the unaffected eye. If irritation or pain develops, see a doctor.
Ingestion:	Never attempt to induce vomiting. Do not attempt to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious. Wash out the mouth with water. If the exposed subject is fully conscious, give plenty of water to drink, see a doctor.

5. FIRE FIGHTING MEASURES

Flammable Properties:	None expected for the product, although the packaging is combustible.
Suitable Extinguishing Media:	Carbon dioxide, dry chemical powder, water or foam. Use media appropriate for the surrounding fire.

ONRAB® "Ultralite" Bait

Material Safety Data Sheet

5. FIRE FIGHTING MEASURES (Continued)

Unsuitable Extinguishing Media:	Dependant on the nature of the surrounding fire.
Specific Hazards Arising :	Toxic, corrosive or flammable thermal decomposition products are expected when the product is exposed to fire.
Protective Equipment and Precautions for Firefighters:	For single package: no special requirements needed. For larger amounts (multiple packages/pallets) of product: since toxic, corrosive or flammable vapours might be evolved from fires involving this product and associated packaging, self contained breathing apparatus and full protective equipment are recommended for firefighters. If possible, contain and collect firefighting water for later disposal.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Wear protective clothing and equipment consistent with the degree of hazard.
Environmental Precautions:	Prevent runoff from entering drains, sewers or streams. Dike or absorb for later disposal.
Methods for Containment and Clean-up:	For spill of baits: wear appropriate protective clothing and eye protection collect the baits by hand and place in properly labelled container for later disposal. Handle gently to avoid rupturing the vaccine container. Small liquid spill: use absorbent pads to soak up the product and place into properly labelled container for later disposal. Treat the area with a 1:10 dilution of household bleach. For large liquid spill: absorb or cover with absorbent such as sand, vermiculite or other non-combustible material and transfer to properly labelled containers for later disposal. Decontaminate the area with a 1:10 dilution of household bleach.
Other Information:	See Section 13 for disposal information.

7. HANDLING AND STORAGE

Handling:	Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Use only with adequate ventilation.
Storage:	Store out of direct sunlight at -10°C or lower.

ONRAB® "Ultralite" Bait

Material Safety Data Sheet

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: General ventilation is adequate.

Personal Protective Equipment (PPE)

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection: Wear gloves impervious to water.

Respiratory Protection: Not required during normal usage.

General Hygiene Considerations: Wash hands and forearms thoroughly before breaks and at the end of work. Avoid contact with the eyes and skin. Avoid touching the eyes, mouth or nose during the handling of the product. Do not store food in the working area. Do not eat, drink or smoke in work areas. If exposure to the vaccine is likely eye wash facilities should be available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Bait: Solid.
Vaccine: Liquid.

Appearance: Bait: Consists of a blister pack covered with a sweet smelling dark green waxy coating; the dark green lid has a label printed in black.
Vaccine: Colourless liquid.

Odour: Bait: The baits has a characteristic sweet caramel smell.
Vaccine: Odourless.

Odour Threshold: Not determined.

Boiling Point: Not determined.

Melting Point: Bait: The coating on the bait melts at 60 to 70°C.
Vaccine: Melts at approximately 0°C.

Relative Density: Not determined.
(water =1)

Solubility in/Miscibility with Water: Bait: Insoluble.
Vaccine: Fully miscible.

Vapour Pressure: Not determined.

ONRAB® "Ultralite" Bait

Material Safety Data Sheet

9. PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Flash Point: Not determined.

**Upper & Lower
Flammable/Explosive
Limit:** Not determined.

10. STABILITY AND REACTIVITY

Chemical Stability: Normally stable.

Conditions to Avoid: Temperatures above 50°C may affect the efficacy of the vaccine.

Incompatible Materials: Strong oxidizing agents

**Hazardous Decomposition
Products:** Toxic, corrosive or flammable vapours might be evolved from fires involving this product and associated packaging related to the components of the bait. For health and safety information for individual components refer to the appropriate MSDS for each component.

**Possibility of Hazardous
Reactions:** None known.

11. TOXICOLOGICAL INFORMATION

**Effects of Chronic or
Acute Exposure** The toxicological properties of this mixture have not been characterized. Not expected to have any toxicological effects greater than that of the individual components. For toxicological information for individual components refer to the appropriate MSDS for each component.

Skin Sensitization: Sensitizing effect by skin contact is possible with prolonged exposure.

12. ECOLOGICAL INFORMATION

Aquatic toxicity: The toxicological properties of this mixture have not been characterized. Not expected to have any toxicological effects greater than that of the individual components. For toxicological information for individual components refer to the appropriate MSDS for each component.

General Notes: Do not allow large quantities of the product or vaccine to reach ground water, water course or sewage system.

Viability of the virus varies with environmental conditions. Not expected to have an adverse effect.

ONRAB® "Ultralite" Bait

Material Safety Data Sheet

13. DISPOSAL CONSIDERATIONS

Product Recommendations: Burn in an approved incinerator according to federal, provincial/state, and local regulations.

Un-cleaned packaging: Observe all local and national regulations when disposing of the packaging.

General Notes: Any spills of the vaccine should be treated with a 1:10 dilution of household bleach.

14. TRANSPORT INFORMATION

Shipping Information: Not regulated under Canadian TDG Regulations.

15. REGULATORY INFORMATION

WHMIS Classification:



Class D3 Biohazardous
Infectious Material

This product has been classified according to the hazard criteria of the Canadian Controlled Products Regulations, and the MSDS contains all information required by the Controlled Products Regulations.

16. OTHER INFORMATION

MSDS Prepared by: Andrew V. Beresford

Date MSDS Prepared: 07 September 2010

Revision Supersedes: New

This Material Safety Data Sheet and the information it contains is offered in good faith as accurate. This information includes information which has been generated by other parties and which Artemis Technologies Inc. (ATI) has not independently verified. We believe that information to be correct but cannot guarantee its accuracy or completeness. The information provided herein relates only to the specific product designated, and may not be valid where such product is used in combination with any other materials or in any process. The information provided herein is offered solely for your consideration, investigation and verification, and ATI expressly disclaims all liability for reliance thereon. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. In addition, since the conditions of use and suitability of the product for particular uses are beyond ATI's control, all risks of use of the product are therefore assumed by the user, and ATI expressly disclaims any and all liability as to any results obtained or arising from any use of the product. No guarantee, expressed or implied, is made by ATI as to the results to be obtained based on the use of the information, nor does ATI assume any liability arising out of the use of the information.