IMB SAFETY DATA SHEET
Safety Data Sheet for Research Chemicals
Revision Date 2/10/19
According to S7(2) Work Health and Safety Regulation (2011)  
Version 2.0

1. Identification

Material name: BufoTabs

Company information: Institute for Molecular Bioscience
University of Queensland
Brisbane, QLD 4072, Australia

Emergency: +61 449 182 140
General information Phone: +61 7 3346 2980
Fax: +61 7 3346 2990

2. Hazard(s) Identification

Full hazard information is not available for the formulation. A precautionary approach must be taken by a person using, handling or storing the formulation. To the best of our knowledge the toxicological properties have not been thoroughly investigated. The formulation is derived from cane toad toxin, thus it is likely that some or all components have toxic properties.

Based on the currently available data, the active ingredients in BufoTabs may: be irritating to mucous membranes and upper respiratory tract; be harmful by inhalation, ingestion or skin absorption.

3. Composition and Information on Ingredients

Formulation: Ceramic ring (>99%) impregnated with active ingredients (< 1%). Each tablet contains the equivalent of 5-20% of the active ingredients found in the skin of a single cane toad.

Active Ingredients:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Cas No.</th>
<th>Concentration (within impregnation solution)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marinobufagin</td>
<td>470-42-8</td>
<td>73-77%</td>
</tr>
<tr>
<td>Telocinobufagin</td>
<td>772-26-4</td>
<td>8-10%</td>
</tr>
<tr>
<td>Bufalin</td>
<td>465-21-4</td>
<td>8-10%</td>
</tr>
<tr>
<td>Resinobufagin</td>
<td>465-39-4</td>
<td>2-5%</td>
</tr>
<tr>
<td>Arenobufagin</td>
<td>464-74-4</td>
<td>1-4%</td>
</tr>
</tbody>
</table>

4. First Aid Measures

FIRST AID PROCEDURES

Eye contact with dust or particles released from damaged BufoTabs
Hold eyelids apart and flush eyes with plenty of water for at least 15 minutes. Have eyes examined and tested by a medical professional.

Skin contact with BufoTabs
Immediately wash skin with soap and plenty of water.

Ingestion of BufoTabs
Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Inhalation of dust or particles released from damaged BufoTabs
If inhaled, move person into fresh air and give supplemental oxygen if available. If not breathing give artificial respiration. Seek medical attention.
5. Fire Fighting Measures

Flammable properties: Not a fire hazard.
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.

6. Accidental Release Measures

Personal precautions: Avoid breathing dust from broken BufoTabs.
Environmental precautions: Do not use in any manner contrary to the indicated intended use or project instructions.
Methods for cleaning up: Use cloth to wipe up and prevent dust formation. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Handling: Avoid dust formation. Avoid skin or eye contact.
Storage: Store dry and tightly closed in the supplied container.
Recommended storage temperature: Room temperature (< 30ºC)

8. Exposure controls and personal protection

We are not aware of any relevant national exposure limit.

PERSONAL PROTECTIVE EQUIPMENT
Eye / face protection: Avoid contact with eyes.
Skin protection: Avoid contact with skin; wear waterproof gloves.

9. Physical and Chemical Properties

Appearance: Solid ceramic ring
Colour: Pale to light green
Odour: Mild
Odour threshold: Not available
Form: Solid
pH: Not available
Freezing point: Not available
Boiling point: Not available
Flash point: Not available
Evaporation rate: Not available
Flammability limits in air: Not available
Vapour density: Not available
Specific gravity: Not available
Solubility (water): Not available

10. Stability and Reactivity

Chemical stability: Stable under normal conditions.
Conditions to avoid: Do not store in direct sunlight, or excessive heat (> 30ºC)

11. Toxicological Information

To the best of our knowledge the toxicological properties of the majority of active ingredients have not been thoroughly investigated. Purified Bufalin has been classified as Acute Toxicity: Oral, Category 2 under the GHS system by several vendors, however this and other active ingredients make up only a very minor portion (significantly less than 1%) of the final formulation.
12. Ecological Information

BufoTabs contain 5-20% of the quantity of active ingredient found in a single adult cane toad and do not contain any ingredients that exhibit ecotoxicity.

13. Disposal considerations

<table>
<thead>
<tr>
<th>Waste Disposal</th>
<th>Do not dispose of in the environment. Recover and place into standard (urban, rural, or industrial) waste disposal steam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contaminated packaging</td>
<td>Do not reuse for purposes other than storing BufoTabs.</td>
</tr>
</tbody>
</table>

14. Transport Information

IATA / ADG                  | Not dangerous goods                                                                                      |

15. Regulatory Information

**Further information:** This formulation is prepared for use only by approved participants within the *Cane Toad Challenge* research project.

16. Other Information

**Updated information**

The contact information provided can be used to request updates to this SDS. Updates will be provided to approved project participants when available.

**Further information**

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 formulation with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the formulation. We shall not be held liable for any damage resulting from handling or from contact with the above formulation. See also associated Material Shipping Conditions for further conditions.