WHO International Standard
The 2nd International Standard for ANTI-RABIES IMMUNOGLOBULIN, HUMAN
NIBSC code: RAI
Instructions for use
(Version 6.0, Dated 15/09/2016)

1. INTENDED USE
This material has been prepared and characterised by the Statens Serum
Institut (SSI), Copenhagen, Denmark. With effect from 1st July 1997, the
National Institute for Biological Standards and Control (NIBSC), Potters
Bar, UK is the custodian and distributor of this material.

For details of this International Standard, please refer to the enclosed
package insert from the Statens Serum Institut.

The preparation is labelled ‘Rabies immunoglobulin’. The package insert from SSI is attached.

2. CAUTION
This preparation is not for administration to humans or animals in
the human food chain.

The preparation contains material of human origin, and either the final
product or the source materials, from which it is derived, have been
tested and found negative for HBsAg, anti-HIV and HCV RNA. As with
all materials of biological origin, this preparation should be regarded as
potentially hazardous to health. It should be used and discarded
according to your own laboratory’s safety procedures. Such safety
procedures should include the wearing of protective gloves and
avoiding the generation of aerosols. Care should be exercised in
opening ampoules or vials, to avoid cuts.

3. UNITAGE
Each ampoule contains 30 International Units of rabies antibody

4. CONTENTS
Country of origin of biological material: USA, Austria and Germany.

This material contains the freeze dried residue of human immunoglobulin
containing antibodies to rabies virus. This consists of approximately 50mg
protein, 23mg amino acetic acid and 2.8mg sodium chloride. The plasma
from which it was produced originated in the USA, Austria and Germany.

5. STORAGE
Ampoules should be stored at -20°C on receipt.

Please note: because of the inherent stability of lyophilized
material, NIBSC may ship these materials at ambient temperature.

6. DIRECTIONS FOR OPENING
DIN ampoules have an ‘easy-open’ coloured stress point, where the
narrow ampoule stem joins the wider ampoule body.

Tap the ampoule gently to collect the material at the bottom (labeled)
end. Ensure that the disposable ampoule safety breaker provided is
pushed down on the stem of the ampoule and against the shoulder of
the ampoule body. Hold the body of the ampoule in one hand and the
disposable ampoule breaker covering the ampoule stem between the
thumb and first finger of the other hand. Apply a bending force to open
the ampoule at the coloured stress point, primarily using the hand
holding the plastic collar.
Care should be taken to avoid cuts and projectile glass fragments that
might enter the eyes, for example, by the use of suitable gloves and an
eye shield. Take care that no material is lost from the ampoule and no
glass falls into the ampoule. Within the ampoule is dry nitrogen gas at
slightly less than atmospheric pressure. A new disposable ampoule
breaker is provided with each DIN ampoule.

7. USE OF MATERIAL
No attempt should be made to weigh out any portion of the freeze-dried
material prior to reconstitution

Ampoules should be reconstituted in 1ml dH2O. This material can be used in
RFFIT or mouse neutralisation tests.

8. STABILITY
Reference materials are held at NIBSC within assured, temperature-
controlled storage facilities and they should be stored on receipt as
indicated on the label. It is the policy of WHO not to assign an expiry date
to their international reference materials. They remain valid with the
assigned potency and status until withdrawn or amended.

NIBSC follows the policy of WHO with respect to its reference materials.

9. REFERENCES
Lyng, J. Calibration of a replacement preparation for the international
Standard for Rabies immunoglobulin Rabies IgG IS Biologicals 1994 22
249-255.


10. ACKNOWLEDGEMENTS
Not applicable

11. FURTHER INFORMATION
Further information can be obtained as follows;
This material: enquiries@nibsc.org

WHO Biological Standards:
http://www.who.int/biologicals/en/

JCTLM Higher order reference materials:

Derivation of International Units:
http://www.nibsc.org/standardisation/international_standards.aspx

Ordering standards from NIBSC:
http://www.nibsc.org/products/ordering.aspx

NIBSC Terms & Conditions:
http://www.nibsc.org/terms_and_conditions.aspx

12. CUSTOMER FEEDBACK
Customers are encouraged to provide feedback on the suitability or use
of the material provided or other aspects of our service. Please send any
comments to enquiries@nibsc.org

13. CITATION
In all publications, including data sheets, in which this material is
referenced, it is important that the preparation's title, its status, the NIBSC
code number, and the name and address of NIBSC are cited and cited
correctly.

14. MATERIAL SAFETY SHEET
Classification in accordance with Directive 2000/54/EC, Regulation (EC)
No 1272/2008: Not applicable or not classified

<table>
<thead>
<tr>
<th>physical and Chemical properties</th>
<th>Corrosive:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical appearance: Freeze dried powder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stable:</td>
<td>Yes</td>
<td>Oxidising:</td>
</tr>
<tr>
<td>Hygroscopic:</td>
<td>No</td>
<td>Irritant:</td>
</tr>
</tbody>
</table>
### Toxicological properties

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of inhalation</td>
<td>Not established, avoid inhalation</td>
</tr>
<tr>
<td>Effects of ingestion</td>
<td>Not established, avoid ingestion</td>
</tr>
<tr>
<td>Effects of skin absorption</td>
<td>Not established, avoid contact with skin</td>
</tr>
</tbody>
</table>

### Suggested First Aid

<table>
<thead>
<tr>
<th>Condition</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>Seek medical advice</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Seek medical advice</td>
</tr>
<tr>
<td>Contact with eyes</td>
<td>Wash with copious amounts of water. Seek medical advice</td>
</tr>
<tr>
<td>Contact with skin</td>
<td>Wash thoroughly with water</td>
</tr>
</tbody>
</table>

### Action on Spillage and Method of Disposal

Spillage of ampoule contents should be taken up with absorbent material wetted with an appropriate disinfectant. Rinse area with an appropriate disinfectant followed by water. Absorbent materials used to treat spillage should be treated as biological waste.

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15. **LIABILITY AND LOSS**

In the event that this document is translated into another language, the English language version shall prevail in the event of any inconsistencies between the documents.

Unless expressly stated otherwise by NIBSC, NIBSC’s Standard Terms and Conditions for the Supply of Materials (available at [http://www.nibsc.org/About_Us/Terms_and_Conditions.aspx](http://www.nibsc.org/About_Us/Terms_and_Conditions.aspx) or upon request by the Recipient) (“Conditions”) apply to the exclusion of all other terms and are hereby incorporated into this document by reference. The Recipient’s attention is drawn in particular to the provisions of clause 11 of the Conditions.

16. **INFORMATION FOR CUSTOMS USE ONLY**

<table>
<thead>
<tr>
<th>Item</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country of origin for customs purposes*</td>
<td>Denmark</td>
</tr>
<tr>
<td>* Defined as the country where the goods have been produced and/or sufficiently processed to be classed as originating from the country of supply, for example a change of state such as freeze-drying.</td>
<td></td>
</tr>
<tr>
<td>Net weight</td>
<td>1g</td>
</tr>
<tr>
<td>Toxicity Statement</td>
<td>Non-toxic</td>
</tr>
<tr>
<td>Veterinary certificate or other statement</td>
<td>if applicable.</td>
</tr>
<tr>
<td>Attached</td>
<td>No</td>
</tr>
</tbody>
</table>

17. **CERTIFICATE OF ANALYSIS**

NIBSC does not provide a Certificate of Analysis for WHO Biological Reference Materials because they are internationally recognised primary reference materials fully described in the instructions for use. The reference materials are established according to the WHO Recommendations for the preparation, characterization and establishment of international and other biological reference standards [http://www.who.int/bloodproducts/publications/TRS932Annex2_Inter_biologicalstandardsrev2004.pdf](http://www.who.int/bloodproducts/publications/TRS932Annex2_Inter_biologicalstandardsrev2004.pdf) (revised 2004). They are officially endorsed by the WHO Expert Committee on Biological Standardization (ECBS) based on the report of the international collaborative study which established their suitability for the intended use.
5. REFERENCES

2. Biologicals, in press