Medicines & Healthcare products Regulatory Agency

NIBSC Confidence in Biological Medicines

WHO International Standard
3rd International Standard for Anti-Measles
NIBSC code: 97/648
Instructions for use
(Version 2.0, Dated 26/02/2008)

1. INTENDED USE

The dual International Standard for anti-measles and anti-polio sera (2nd International Standard Anti-Measles serum (Human)/2nd International Standard for anti-poliovirus serum types 1, 2, and 3: NIBSC Code: 66/202) was established by the Expert Committee on Biological Standardization of the World Health Organization in 1991 (WHO, 1992)

Stocks of the above standard are now exhausted and collaborative study was run in 2005/06 to establish a replacement. The 3rd International Standard was established by ECBS in 2006 and is available from NIBSC.

This is a WHO material reference number WHO/BS/06.2031

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.he preparation has been tested and found negative for HBsAg, HCV antibody, HIV antibody and HCV RNA by PCR.

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

For use in Plaque Reduction Neutralization Test (PRNT) assays the reconstituted material will contain **3 IU anti-measles activity (3,000 milli-IUs**)

This preparation has not been calibrated for use in ELISA assays and/or a unitage assigned for this use.

Please also note that this material may not be suitable for use in $TCND_{50}$ neutralization assays due to cytotoxicity of the preparation at low dilutions. It is recommended that if intended for this purpose it be tested prior to use in the appropriate cell/assay system.

If you have any further questions concerning the unitage or use of this material then please contact enquiries@nibsc.ac.uk at NIBSC. A full copy of the collaborative study report (WHO, 2006) is also available upon request.

4. CONTENTS

Country of origin of biological material: Netherlands

.

Each ampoule contains a freeze-dried residue comprising (under an atmosphere of nitrogen) human serum containing antibodies against measles virus. Each ampoule should be reconstituted in 1ml of distilled water.

Preparation of Standard

The candidate replacement standard, NIBSC Code 97/648 was produced from a pool of defibrinated plasma supplied by CLB, Amsterdam. The plasma was filled, lyophilized and sealed into ampoules at NIBSC in November 1997.

The mean weight of the fill was 1.02041g,(taken from a mean of 85 samples) with a coefficient of variation of 0.31%. The mean dry weight of the fill measured by coulometric Karl Fischer was 81.17mg (taken from a mean of 6) and the residual moisture content 0.12%

Product Summary for the 3rd International Standard for Anti-Measles Serum (97/648)

Presentation	Ampoule
Excipients/additives	None
Coefficient of variation of the liquid fill	0.31%
Residual Moisture	0.12%

5. STORAGE

Unopened vials should be stored at -20°C or below until use. It is recommended that samples be used as soon after receipt as possible.

After re-constitution samples may be aliquotted and stored frozen (ideally at -70°C) for further use. Studies have shown that reconstituted samples are stable for upto 28 days at this temperature. For longer periods of storage recipients should use their own in-house criteria to determine the length of time for which reconstituted samples can be retained.

Please note that the 3rd IS is provided as a reagent for calibrating your own in-house reference material(s). With this in mind recipients should remember that the supply of this reagent will be limited to 3 vials per organization per year.

It is not intended that this product be used as a working reference and should only be used to calibrate your own in-house reference

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
After re-constitution samples may be aliquotted and stored frozen (ideally at -70°C) for further use. Studies have shown that reconstituted samples are stable for upto 28 days at this temperature. For longer periods of storage recipients should use their own in-house criteria to determine the length of time for which reconstituted samples can be retained.

National Institute for Biological Standards and Control,
Potters Bar, Hertfordshire, EN6 3QG. T +44 (0)1707 641000, nibsc.org
WHO International Laboratory for Biological Standards,
UK Official Medicines Control Laboratory

World Health Organization

Please note that the 3rd IS is provided as a reagent for calibrating your own in-house reference material(s). With this in mind recipients should remember that the supply of this reagent will be limited to 3 vials per organization per year.

8. STABILITY

Reference materials are held at NIBSC within assured, temperature-controlled storage facilities. Reference Materials should be stored on receipt as indicated on the label. Once reconstituted, diluted or aliquoted, users should determine the stabilty of the material according to their own method of preparation, storage and use.

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

Users who have data supporting any deterioration in the characteristics of any reference preparation are encouraged to contact NIBSC.

9. REFERENCES

WHO (1992) Expert Committee on Biological Standardization; Forty-second report Technical Report Series, 822, 7-8.

WHO (2006) Report of a Collaborative Study to Assess the Suitability of a Replacement for the 2nd International Standard for Anti-Measles Sera; WHO/BS/06.2031.

10. ACKNOWLEDGEMENTS

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:
http://www.bipm.org/en/committees/jc/jctlm/
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

Physical and Chemical properties	
Physical appearance: White.yellowish freeze-dried cake	Corrosive: No
Stable: Yes	Oxidising: No
Hygroscopic: No	Irritant: No
Flammable: No	Handling: See caution, Section 2
Other (specify):	Contains material of human origin
Toxicological properties	
Effects of inhalation:	Not established, avoid inhalation
Effects of ingestion:	Not established, avoid ingestion
Effects of skin absorption:	Not established, avoid contact with skin
Suggested First Aid	
Inhalation:	Seek medical advice
Ingestion:	Seek medical advice
Contact with eyes:	Wash with copious amounts of water. Seek medical advice
Contact with skin:	Wash thoroughly with water.
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.	

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 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

Country of origin for customs purposes*: United Kingdom * 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.
Net weight: 0.1g
Toxicity Statement: Non-toxic
Veterinary certificate or other statement if applicable**.** **Attached:** No

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_biolefstandardsrev2004.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.