



**Influenza Reagent  
Influenza anti B/Beijing/1/87 HA serum  
NIBSC code: 88/678  
Instructions for use  
(Version 4.0, Dated 29/03/2008)**

**1. INTENDED USE**

Influenza antiserum reagent 88/678 is prepared in sheep for the single radial diffusion assay of B/Beijing/1/87 antigens.

**2. CAUTION**

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

The material is not of human or bovine origin. 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**

No unitage is assigned to this material.

**4. CONTENTS**

Country of origin of biological material: United Kingdom.  
The antiserum was prepared in Sheep (SH85) to the purified HA of B/Beijing/1/87 virus. The HA antigen was extracted from purified virus by treatment with bromelain and purified by sedimentation on sucrose gradients (Brand, C N and Skehel JJ, Nature, New Biology, 1972, 238, 145-147). One dose of approximately 50 micrograms of HA with Freund's complete adjuvant (FCA) was given intramuscularly followed two weeks later by two further doses of 25 micrograms of HA, seven further doses of 12.5 micrograms of HA were given at two weekly intervals. Seventeen weeks after initial immunization, serum was collected, diluted 1:2 with TRIS-HCl buffer and processed for freeze-drying in 2 ml volumes as described by Campbell P J, Journal of Biological Standardization, 1974, 2, 249-267. The mean weight of 7 vials, test weighed was 2.08g with a coefficient of variation of 9.25%.

**5. STORAGE**

-20°C

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

**6. DIRECTIONS FOR OPENING**

Vials have a 'flip-up' circular cap. Either on the cap or the collar of the vial, there is an indication of the point at which to lever off the cap. This exposes an area of the stopper through which reconstitution and withdrawal of the preparation can be made using a hypodermic needle and syringe. If use of a pipette is preferred, then fully remove the metal collar using, for example, forceps, taking care to avoid cuts by wearing appropriate gloves. Remove the stopper for access. Care should be taken to prevent loss of the contents.

**7. USE OF MATERIAL**

**No attempt should be made to weigh out any portion of the material**

Reconstitute with total contents of one ampoule of Reagent 88/678V with 2 ml of distilled water. Allow to stand for a minimum of 5 minutes before use to allow for complete solution of the freeze-dried material. It is recommended that the Reagent is diluted 1:2 with phosphate-buffered saline prior to use.

For the assay of virus antigens containing 20-50 micrograms of HA activity in 1 ml, 13 µl of the diluted Reagent solution should be added to 1 ml of molten agarose. Antigens of lower concentration (5-20 micrograms

HA/ml are assayed by adding 6.5 µl of the Reagent solution of 1 ml agarose.

Antiserum Reagent 88/678V should be used according to the method described by Wood, JM, Schild, GC, Newman, RW and Seagroatt, VA Journal of Biological Standardisation, 1977, 5, 237-247.

**8. STABILITY**

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.

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 stability 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**

None

**10. ACKNOWLEDGEMENTS**

None

**11. FURTHER INFORMATION**

Further information can be obtained as follows:  
This material: [enquiries@nibsc.org](mailto: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](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](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](mailto: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 powder	Corrosive: No
Stable: Yes	Oxidising: No



Hygroscopic: No	Irritant: No
Flammable: No	Handling: See caution, Section 2
Other (specify): Contains Sheep Serum and Sodium Azide (0.05% w/v)	
<b>Toxicological properties</b>	
Effects of inhalation: Avoid inhalation	
Effects of ingestion: Avoid ingestion	
Effects of skin absorption: Avoid contact with skin	
<b>Suggested First Aid</b>	
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.	
<b>Action on Spillage and Method of Disposal</b>	
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](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

<b>Country of origin for customs purposes*:</b> 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.
<b>Net weight:</b> 2g
<b>Toxicity Statement:</b> Non toxic
<b>Veterinary certificate or other statement</b> if applicable. <b>Attached:</b> No