



**Influenza Reagent**  
**Influenza Virus Infectious NIB-142**  
**(A/District of Columbia/27/2023) (H3N2)**  
**NIBSC code: 24/164**  
**Instructions for use**  
**(Version 4.0, Dated 22/10/2024)**

§

**1. INTENDED USE**

Reagent 24/164 was prepared from NIB-142 (H3N2), a reassortant of A/District of Columbia/27/2023 (H3N2) and NYMC-X-379 (H1N1), which was processed in 250µl volumes as liquid stock. The derivation and known passage history of 24/164 are attached.

**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.  
Each ampoule contains 250µl (nominal) of infectious influenza virus as allantoic fluid from SPF embryonated hen's eggs.

**5. STORAGE**

Store in the dark at -70°C or below.  
Material type: Liquid – will be shipped according to the storage and shipping conditions of the product

**6. DIRECTIONS FOR OPENING**

Vials have a screw cap; an internal stopper may also be present. The cap should be removed by turning anti-clockwise. Care should be taken to prevent loss of the contents. Please note: If a stopper is present on removal of the cap, the stopper should remain in the vial or be removed with the cap.

**7. USE OF MATERIAL**

Ready to use.

**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.

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

**9. REFERENCES**

N/A.

**10. ACKNOWLEDGEMENTS**

N/A.

**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](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

**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

<b>Physical and Chemical properties</b>	
Physical appearance: Clear liquid	Corrosive: No
Stable: Yes	Oxidising: No
Hygroscopic: No	Irritant: No
Flammable: No	Handling: See caution, Section 2
Other Live influenza virus (specify):	
<b>Toxicological properties</b>	
Effects of inhalation:	Likelihood of influenza virus, avoid inhalation
Effects of ingestion:	Not established, avoid ingestion
Effects of skin absorption:	Not established, 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 virucidal agent. Rinse area with an appropriate virucidal agent 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> 0.25g per vial
<b>Toxicity Statement:</b> Non-toxic
<b>Veterinary certificate or other statement</b> if applicable.
<b>Attached:</b> No

**NIB-142 (H3N2) Passage History**

Cumulative number of passages	Passage numbers at each stage	Lot	Laboratory
E4	E4	3030760259	CDC, USA
E5	E4/E1	48320	MHRA, UK
E11	E4/E7	48410*	MHRA, UK

\*The HA titre of this virus using 0.7% guinea pig red blood cells is 512. The infectious titre is unknown.

Sterility: no visible contamination was detected in a variety of media (tryptone soya broth, thioglycolate broth, Sabouraud's broth and blood agar plates) after 14 days incubation.

The HA and NA sequence of this virus are available on GISAID, with the accession number EPI\_ISL\_19476832.

**Derivation of NIB-142 (H3N2)**



- Strain: A/District of Columbia/27/2023
- Received from CDC, USA: E4, Lot.: 3030760259
- Passages undertaken at NIBSC: one, E4/E1, Lot.: 48320
- Genetic analysis: 5:3 with the PB1 gene from the wildtype

Mixed Infection: A/District of Columbia/27/2023 ( $10^{-1}$ ) x NYMC-X-379 ( $10^{-5}$ )



HA Titre: 256

1<sup>st</sup> Antiserum Passage: Inoculum at  $10^{-2}$  with NYMC-X-379 antiserum



HA Titre: 128

2<sup>nd</sup> Antiserum Passage: Inoculum at  $10^{-3}$  with NYMC-X-379 antiserum



HA Titre: 256

1<sup>st</sup> Limiting Dilution Passage: Inoculum at  $10^{-8}$



HA Titre: 256

2<sup>nd</sup> Limiting Dilution Passage: Inoculum at  $10^{-9}$



HA Titre: 256

Final Amplification: Inoculum at  $10^{-6}$

HA Titre: 512

Lot: 48410

Total number of passages since mixed infection: E6

SPF eggs were used for all passages.

Please note ferret antiserum raised against NYMC-X-379 was used for all antiserum passages.