



**Influenza Reagent  
Influenza Virus infectious NIB-74xp  
NIBSC code: 13/202  
Instructions for use  
(Version 2.0, Dated 18/05/2016)**

**1. INTENDED USE**

Reagent 13/202 is prepared from NIB-74xp (A/Christchurch/16/2010 (H1N1) x NYMC X-157 (H3N2) ) which was processed for freeze drying in 250 µl volumes as described by Campbel, PJ, Journal of Biological Standardisation, 1974, 2, 249-267. The passage history of NIB-74xp is 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 freeze dried allantoic fluid from embryonated SPF premium plus hen's eggs.

**5. STORAGE**

Store in the dark at -20°C or below

**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. Various types of ampoule breaker are available commercially. To open the ampoule, tap the ampoule gently to collect material at the bottom (labelled) end and follow manufactures instructions provided with the ampoule breaker.

**7. USE OF MATERIAL**

Reconstitute the contents of one ampoule of reagent with 250µl of sterile distilled water. Leave for a minimum of 5 minutes before use to allow for complete solution of freeze dried material. A range of dilutions (e.g. 10<sup>-3</sup> to 10<sup>-5</sup>) should be made in a suitable medium for initial cultivation.

**8. STABILITY**

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**

NA

**10. ACKNOWLEDGEMENTS**

NA

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Potters Bar, Hertfordshire, EN6 3QG. T +44 (0)1707 641000, [nibsc.org](http://nibsc.org)  
WHO International Laboratory for Biological Standards,  
UK Official Medicines Control Laboratory

**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): Live influenza virus	
Toxicological properties	
Effects of inhalation:	Likelihood of influenza virus infection
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 contents should be taken up with absorbent material wetted with a virucidal agent. Rinse area with an appropriate virucidal agent followed by water. Absorbent materials used to treat spillage should be treated as biologically hazardous 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> NA
<b>Toxicity Statement:</b> Non-toxic
<b>Veterinary certificate or other statement</b> if applicable.
<b>Attached:</b> No

**Passage history of NIB-74xp**

Passage	Lot	Laboratory
E1 – E12		NIBSC, Hertfordshire, UK
E13	36160	NIBSC, Hertfordshire, UK

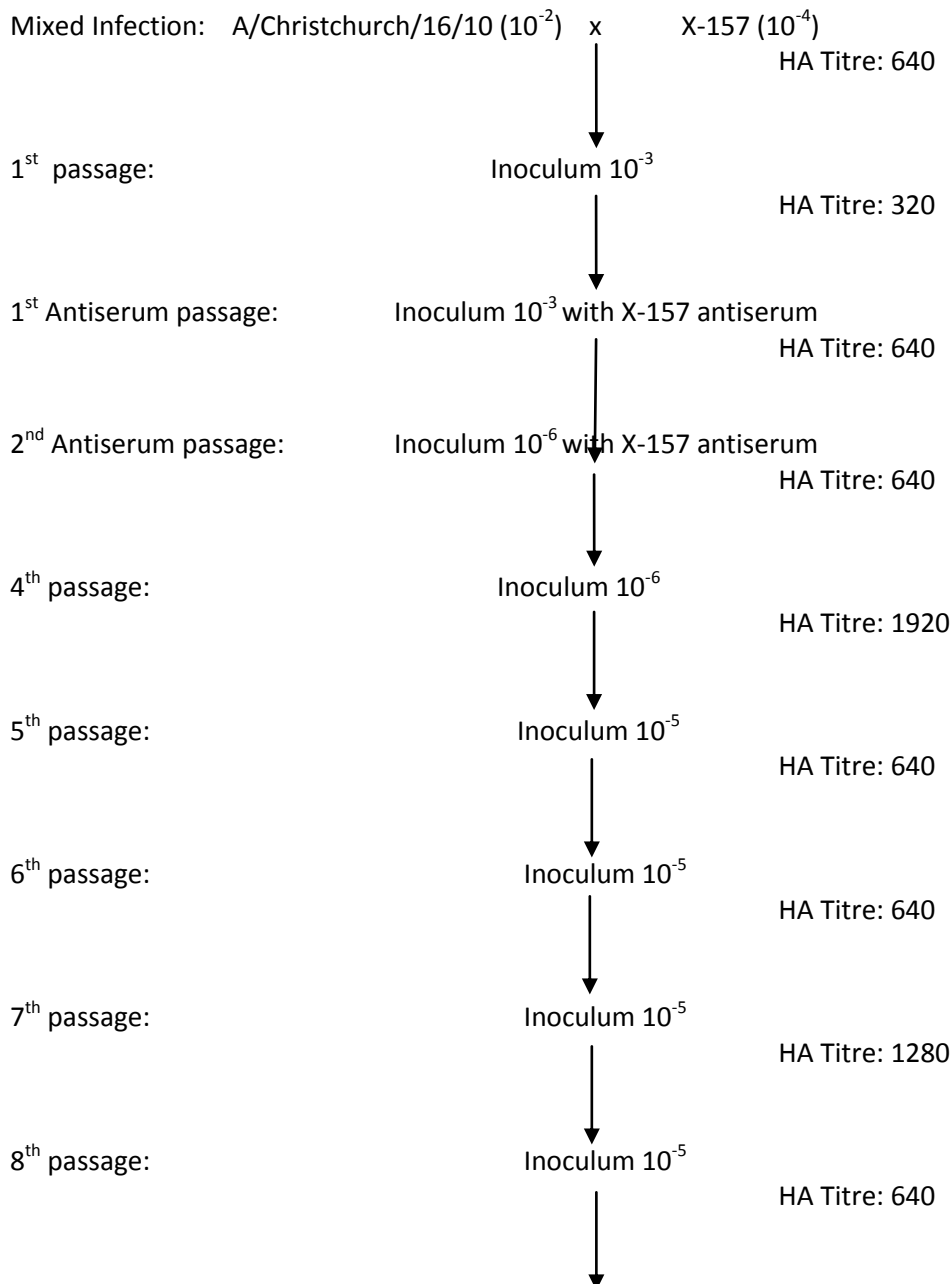
Sterility: no visible contamination was detected in a variety of media (tryptose soya broth, thioglycolate broth, Sabouraud's broth and blood agar plates) after 14 days incubation.

The HA and NA sequence of this virus is available on GISAID with the accession number EPI\_ISL\_210175.



Derivation of NIB-74xp  
A/Christchurch/16/10 (H1N1)-like High Growth Reassortant

Strain: A/Christchurch/16/2010  
Received from WHO Melbourne # SL/1007239-1, E2  
Passage undertaken at NIBSC #32740, E3





9 <sup>th</sup> passage:	Inoculum 10 <sup>-5</sup>	HA Titre: 1280
	↓	
10 <sup>th</sup> passage:	Inoculum 10 <sup>-5</sup>	HA Titre: 1280
	↓	
11 <sup>th</sup> passage:	Inoculum 10 <sup>-5</sup>	HA Titre: 1280
	↓	
12 <sup>th</sup> passage:	Inoculum 10 <sup>-5</sup>	HA Titre: 1280
	↓	
13 <sup>th</sup> passage:	Inoculum 10 <sup>-5</sup>	HA Titre: 640 <u>Lot: 36160</u>

Total number of passages since mixed infection= E13.

SPF premium plus eggs were used for all passages.

RT-PCR/RFLP analysis indicates that NIB-74xp has HA and NA genes from A/Christchurch/16/10 and MX, NP, PB1, PB2, PA and NS genes from X-157 (A/PR/8/34) making it a 6:2 reassortant.

*The HA sequence of NIB-74 is identical to that of the parental virus, A/Christchurch/16/2010.*<sup>1</sup>

<sup>1</sup>Sequence data provided by WHO influenza collaborating centre, NIMR, Mill Hill, London NW7, UK



**Antigenic analysis of pandemic influenza A(H1N1) viruses (07/09/2011)<sup>1</sup>**

Viruses	Passage	Post infection ferret antisera							
		A/Cal/ 7/09	A/Bay/ 69/09	A/Lviv/ N6/09	A/CC/ 16/10	A/HK/ 3934/11	A/Ast/ 1/11	A/St P/ 27/11	A/St P/ 100/11
<b>Reference virus</b>									
A/California/7/2009	E2/E4	<b>2560</b>	2560	2560	1280	2560	2560	5120	5120
A/Bayern/69/2009	M4/M2	160	<b>640</b>	320	80	40	80	160	80
A/Lviv/N6/2009	M5	640	1280	<b>640</b>	160	80	160	160	160
A/Christchurch/16/2010	E2/E1	1280	2560	2560	<b>5120</b>	1280	2560	1280	2560
A/Hong Kong/3934/2011	M2/M2	640	160	320	320	<b>1280</b>	640	640	1280
A/Astrakhan/1/2011	M4	1280	640	1280	1280	2560	<b>1280</b>	1280	2560
A/St Petersburg/27/2011	E1/E1	5120	2560	5120	2560	5120	2560	<b>2560</b>	5120
A/St Petersburg/100/11	E1/E1	1280	640	1280	640	1280	1280	1280	<b>2560</b>
<b>Test virus</b>									
NIB-74xp	E13	2560	2560	2560	5120	2560	2560	2560	5120

<sup>1</sup> Data received from WHO Influenza Collaborating Centre, NIMR, Mill Hill, London NW7, UK

*Based on this data the analysis from the WHO influenza collaborating centre is that NIB-74xp is A/California/7/2009-like*