Medicines & Healthcare products Regulatory Agency

NIBSC Confidence in Biological Medicines

Non WHO Reference Material
1st British Reference Preparation for Prekallikrein Activator (PKA)
NIBSC code: 79/572
Instructions for use
(Version 5.0, Dated 23/05/2012)

This material is not for in vitro diagnostic use.

1. INTENDED USE

The 1st British Reference Preparation for Prekallikrein Activator (PKA) was established in 1982. It consists of ampoules each containing (approximately) 5ml plasma protein fraction (PPF). This preparation is intended to be used as a standard in assays to measure PKA activity in solutions of albumin or immunoglobulins

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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 78.9 units/ml PKA (approximately 400 units in total).
The 1st British Reference Preparation for Prekallikrein Activator (code labeled 79/572) was calibrated in terms of the 2nd PKA Reference Preparation of the Bureau of Biologics, FDA, Bethesda, Maryland, USA (1). The PKA content was determined by four laboratories using variations of the S-2302 synthetic chromogenic substrate (Kabi Diagnostica, Stockholm) method to measure kallikrein generated by PKA. The potency, based on the combined results of 16 assays from the four laboratories was estimated to be 78.9 units/ml with confidence limits (P=0.95) of 73.5 – 84.6 units/ml.

4. CONTENTS

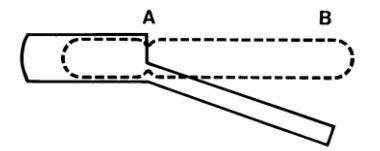
Country of origin of biological material: United Kingdom.
The starting material consisted of a single batch of plasma protein fraction and approximately 2000 ampoules were filled with 5ml aliquots.

5. STORAGE

The preparation should be kept frozen and maintained at -20 °C or lower until required.

6. DIRECTIONS FOR OPENING

Tap the ampoule gently to collect the material at the bottom (labelled) end. Ensure ampoule is scored all round at the narrow part of the neck, with a diamond or tungsten carbide tipped glass knife file or other suitable implement before attempting to open. Place the ampoule in the ampoule opener, positioning the score at position 'A'; shown in the diagram below. Surround the ampoule with cloth or layers of tissue paper. Grip the ampoule and holder in the hand and squeeze at point 'B'. The ampoule will snap open. Take care to avoid cuts and projectile glass fragments that enter eyes. Take care that no material is lost from the ampoule and that no glass falls into the ampoule.



Side view of ampoule opening device containing an ampoule positioned ready to open. 'A' is the score mark and 'B' the point of applied pressure.

7. USE OF MATERIAL

It is recommended that the contents of an ampoule be divided into aliquots of a volume suitable for the needs of the individual laboratory. These aliquots should be stored at -20ºC until required.

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.
The PKA activity of samples of the 1st British Reference Preparation for Prekallikrein Activator (PKA) which had been stored for five months at 4ºC, 20ºC, and 37ºC were compared with samples of the same material which had been stored at -20ºC. From the Arrhenius equation relating degradation rate to absolute temperature, the predicted loss of activity at -20ºC is 0.001% per year (upper 95% limit: 0.003% per year). At -20ºC the predicted loss is 0.154% in one week and at 37ºC this rises to 3.381% per week.

9. REFERENCES

1. Memorandum from Director, Bureau of Biologics, Food and Drug Administration, Bethesda, MD 20205, USA, dated 4th May 1981
2. Biometrics, 1977, 33, 736

10. ACKNOWLEDGEMENTS

Protein Fractionation Centre, Scottish National Blood Transfusion Service, Edinburgh, Scotland, for supply of the material; the participants in the collaborative study for calibrating the 1st British Reference Preparation.

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.

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WHO International Laboratory for Biological Standards,
UK Official Medicines Control Laboratory

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: Frozen Liquid	Corrosive: No
Stable: Yes	Oxidising: No
Hygroscopic: Yes	Irritant: Unknown
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: 5 g
Toxicity Statement: Toxicity not assessed
Veterinary certificate or other statement if applicable**.** **Attached:** No