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Information Leaflet Ph. Eur. Reference Standard

Heparin low-molecular-mass for calibration CRS batch 5

1. Identification

Catalogue code: H0190000 Unit Quantity *: ca 10 mg

*The total amount of material (active substance and excipients, if any) which has been filled in each vial or ampoule, given **for customs purposes**. Circa ("ca") quantity is not to be considered accurate from an analytical point of view.

2. Scientific Information

2.1 Intended use

Heparin low-molecular-mass for calibration CRS is intended for use in the calibration of the system used in the identification and molecular mass distribution procedure of Low-Molecular-Mass (LMM) heparins according to the Ph. Eur. Monograph 0828. The CRS is a freeze-dried preparation presented in vials and characterised by the following Broad Standard Table:

Point	$\log_{10}(M)$	Molecular Mass *(M)*	Mass % > *M*
1	2.78	600	99.60
2	3.08	1200	96.13
3	3.26	1800	91.06
4	3.38	2400	85.51
5	3.48	3000	79.32
6	3.56	3600	72.80
7	3.62	4200	66.11
8	3.68	4800	59.51
9	3.73	5400	53.17
10	3.78	6000	47.08
11	3.82	6600	41.41
12	3.86	7200	36.11
13	3.92	8400	27.04
14	3.98	9600	19.91
15	4.08	12000	10.79
16	4.13	13600	7.04
17	4.19	15600	4.05
18	4.26	18000	2.23

2.2 Instructions for use

Allow the vial and contents to reach room temperature.

Tap vial gently to collect material at the bottom.

Open carefully the vial and dissolve it in the required volume of solvent and proceed as indicated in the appropriate test in the monograph. Mix gently to ensure complete dissolution.
To optimize the use of this material, aliquots of the preparation (e.g. 100 µL/tube) can be kept at -20°C ± 5°C for at least 10 months. This information is provided for guidance only so that the stability of the reconstituted material should be determined by the users for their own local storage conditions.

2.3 Uncertainty of the assigned value, when applicable

The uncertainty of the assigned value is not stated since it is considered to be negligible in relation to the defined limits of the method-specific assays for which the reference standard is used. Please also refer to Ph. Eur. chapter 5.12.

2.4 Validity

Ph. Eur. Reference Standards are periodically tested to ensure their continuous fitness for purpose. For each valid Ph. Eur. Reference Standards, a Batch Validity Statement at the time of use can be downloaded and printed from the EDQM website (Reference Standards Database).

3. Storage conditions

Store the original container at +5°C ± 3°C. protected from light upon receipt. Once opened, the vial/ampoule is for immediate use and the stability of the contents of opened vials or ampoules cannot be guaranteed.

4. Safety

Biological preparation for laboratory use only. Handle in accordance with good occupational hygiene, safety and laboratory practices and take precautions to avoid exposure.

5. Shipping conditions

Please check shipping conditions on the EDQM website (Reference Standards Database).

6. Additional information

Caruncho Garcia-Moreno S., Mulloy B, Rodrigo-Castro I, Denault W, Le Tallec D, Terao E. Establishment of Replacement Batches for the *Ph. Eur. Heparin Low-Molecular-Mass for Calibration CRS*. Pharmeuropa Bio Sci notes (in preparation).

Pharmeuropa Bio & Sci Notes is an open-access publication that is freely available on the EDQM website (www.edqm.eu). Further information available on EDQM website (Knowledge Database, Reference Standards Database, HelpDesk).

7. Citation

Users shall ensure that any reference made to an EDQM Reference Standard in any publication, presentation or public document (ex. scientific articles, data sheets for kits) bears the exact name, and catalogue code of the Reference Standard and the exact name and address of EDQM as given on the first page of this information leaflet.

8. Warranties, Liabilities and responsibility

- Safety

In the event of any safety concerns, please read carefully the safety data sheets or safety data statements available for each product. It is for Purchasers to determine independently the risks associated with the items and to take appropriate safety measures, including the provision of appropriate information, equipment and training of those persons coming into contact with the item.

- Warranties

Except for the use of Reference Standards in tests and assays carried out in accordance with the official methods of the European Pharmacopoeia and by professionals with the necessary technical skills and at their own discretion and risk, the EDQM makes no representation, contractual statement, or expression of opinion concerning the quality or safety of any item supplied, the presence of any defect in it, or its fitness for any particular purpose except that as described above.

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Any liability of the EDQM for injury, loss or damage arising from the supply or use of any such item is in any event hereby excluded to the fullest extent permitted internationally accepted commercial standards; in particular, no liability is accepted for loss of profits or indirect or consequential loss.

9. Arbitration & Applicable Law

The aim of the EDQM is to settle any disputes amicably in the framework of its Terms and Conditions. In accordance with the provisions of article 21 of the General Agreement on the Privileges and Immunities of the Council of Europe, all disputes between the EDQM and the Purchaser as regards the application of these General Terms shall be submitted, if a mutual agreement cannot be reached between the parties, to arbitration as laid down in Order No. 481 of the Secretary General, approved by the Committee of Ministers.

This transaction shall be governed by the Council of Europe's relevant regulatory framework, complemented, where necessary, by French national substantive law.

10. Adoption

The suitability for intended use has been officially adopted by the European Pharmacopoeia Commission.

11. Signature

This document is approved by:

Head of the Quality and Risk Management Section

Name: Caroline Offerlé

Date: 22/07/2019