Consultation Questionnaire Exemption 1(a) of RoHS Annex IV

Current wording of the exemption:

Lead and cadmium in ion selective electrodes including glass of pH electrodes.  
  
Expires in July 2021 for cat. 8 and 9 equipment other than in-vitro diagnostic devices and monitoring and control instruments in industry

# Acronyms and Definitions

# Background

Bio Innovation Service, UNITAR and Fraunhofer IZM have been appointed[[1]](#footnote-2) by the European Commission through for the evaluation of applications for the review of requests for new exemptions and the renewal of exemptions currently listed in Annexes III and IV of the RoHS Directive 2011/65/EU.

JBCE has submitted a request[[2]](#footnote-3) for the continuation of the above-mentioned exemption. The request has been subject to a first completeness and plausibility check. The applicant has been asked to answer additional questions and to provide additional information, available on the request webpage of the stakeholder consultation.[[3]](#footnote-4)

SUMMARY OF THE EXEMPTION REQUEST

The applicant requests the renewal of the exemption2 with a slightly different wording and scope (c.f. question 1 below) for the maximum 7 years.

According to the applicant*2*, *“The current exemption is for both lead and cadmium in ion selective electrodes and pH glass electrodes, however JBCE requests renewal only for lead as it has no knowledge of electrodes that contain cadmium.*

*pH meters are used by a wide variety of purposes including use in laboratories, process control, quality control, workplace safety, environment (pollution) analysis. Over the last 14 years, pH electrode manufacturers have carried out research into lead-free glass pH electrodes and this work has been successful for many designs. However where complex or unusual shapes of electrode are required, lead-free glass causes cracks during the manufacturing process that result in premature failure. Therefore, this exemption is needed for these designs. pH electrodes are also used as components inside electrodes for analysis of substances, such as ammonia and this exemption is also needed for these electrodes.*

*Lead-free pH glass electrodes are available on the market. However, lead in glass of pH glass electrode is required in order to create intermediate layer for the connection between stem tube and pH-responsive glass or pH glass membrane. Some complicated shapes explained in this document cannot be formed without lead and currently there is no alternative technology that allow glass to be substituted.”*

The stakeholder consultation is part of the review process for the request at hand. The objective of this consultation and the review process is to collect and to evaluate information and evidence according to the criteria listed in Art. 5(1)(a) of Directive 2011/65/EU.[[4]](#footnote-5)

To contribute to this stakeholder consultation, please answer the questions below by December 2nd, 2020.

# Questions

1. The applicant has requested the renewal of the above exemption of RoHS Annex IV with the following wording for seven years.

*Lead in the stem glass of pH glass electrodes and of ion selective electrodes with complex shapes:*

*1. Micro Type pH Glass Electrode*

*Composite electrodes with a spherical or tube-shaped pH responsive glass membrane with a diameter of 4.0 mm or less and a reference electrode with a liquid junction at a position vertically within 6.5 mm from the tip*

*2. Flat Type pH Glass Electrode*

*pH glass electrodes with a flat pH response membrane at the tip of a glass tube with a diameter of 6.0 mm or more.*

*3. Needle Type pH Glass Electrode*

*Composite electrodes with a conical pH response membrane with a tip angle of 40 ° or less and a diameter of 10 mm or more.*

* 1. Please let us know whether you support or disagree with the wording, scope and re-quested validity period of the exemption. To support your views, please provide detailed technical argumentation / evidence in line with the criteria4 in Art. 5(1)(a).
  2. If applicable, please suggest an alternative wording and duration and explain your proposal.

1. Please provide information concerning possible substitutes or elimination possibilities at pre sent or in the future so that the requested exemption could be restricted or revoked.
   1. Please explain substitution and elimination possibilities and for which part of the ap-plications in the scope of the requested exemption they are relevant.
   2. Please provide information as to research to find alternatives that do not rely on the exemption under review (substitution or elimination), and which may cover part or all of the applications in the scope of the exemption request.
   3. Please provide a roadmap of such on-going substitution/elimination and research (phases that are to be carried out), detailing the current status as well as the estimated time needed for further stages.
2. Do you know of other manufacturers producing devices of comparable features and performance like the ones in the scope of this exemption request that do not depend on RoHS-restricted substances, or use smaller amounts of these substances compared to the applications in the scope of this requested exemption?
3. As part of the evaluation, socio-economic impacts shall also be compiled and evaluated. For this purpose, if you have information on socioeconomic aspects, please provide details in respect of the following:
   1. What are the volumes of EEE in the scope of the requested exemptions which are placed on the market per year?
   2. What are the volumes of additional waste to be generated should the requested ex-emption not be renewed or not be renewed for the requested duration?
   3. What are estimated impacts on employment in total, in the EU and outside the EU, should the requested exemption not be renewed or be renewed for less than the re-quested time period? Please detail the main sectors in which possible impacts are expected – manufacturers of equipment in the scope of the exemption, suppliers, re-tail, users of medical devices, etc.
   4. Please estimate additional costs associated should the requested exemption not be renewed, and how this is divided between various sectors (e.g. private, public, industry: manufacturers, suppliers, retailers).
4. Is there any other information you wish to provide?

Please note that answers to these questions can be published in the stakeholder consultation, which is part of the evaluation of this request. If your answers contain confidential information, please provide a version that can be made public along with a confidential version, in which proprietary information is clearly marked.

Please do not forget to provide your contact details (Name, Organisation, e-mail and phone number) so that the project team can contact you in case there are questions concerning your contribution.

1. It is implemented through the specific contract 070201/2020/832829/ENV.B.3 under the Framework contract ENV.B.3/FRA/2019/0017 [↑](#footnote-ref-2)
2. Exemption requests available at <https://rohs.biois.eu/Ex_1a-IV_JBCE_Renewal-Request.pdf> and <https://rohs.biois.eu/Ex_1a-IV_JBCE_Update_Renewal-Request> [↑](#footnote-ref-3)
3. Clarification questionnaire available at <https://rohs.biois.eu/Ex-1a-IV_JBCE_Questionnaire-1_Clarification.pdf> [↑](#footnote-ref-4)
4. Directive 2011/65/EU (RoHS) available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT> [↑](#footnote-ref-5)