Consultation Questionnaire Exemptions 3 and 39 of RoHS Annex IV

Current wordings of the exemptions:

Exemption 3:

Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate.

Exemption 39:

Lead in micro-channel plates (MCPs) used in equipment where at least one of the following properties is present:  
  
(a) a compact size of the detector for electrons or ions, where the space for the detector is limited to a maximum of 3 mm/MCP (detector thickness + space for installation of the MCP), a maximum of 6 mm in total, and an alternative design yielding more space for the detector is scien­tifically and technically impracticable;  
  
b) a two-dimensional spatial resolution for detecting electrons or ions, where at least one of the following applies:  
(i) a response time shorter than 25 ns;  
(ii) a sample detection area larger than 149 mm²;  
(iii) a multiplication factor larger than 1,3 × 10³3.  
  
(c) a response time shorter than 5 ns for detecting electrons or ions;  
  
(d) a sample detection area larger than 314 mm² for detecting electrons or ions;  
  
(e) a multiplication factor larger than 4,0 × 107.

Expires in July 2021 for cat. 8 and 9 equipment other than in-vitro diagnostic devices and industrial monitoring and control instruments

# 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.

SUMMARY OF THE EXEMPTION REQUEST

The applicant requests the renewal2 and merge of exemptions 3 and 39 of Annex IV with a different wording and scope derived from exemption 39 (c.f. question 1 below) until 2026:

According to the applicant*2*, *“This exemption is required to enable the use of lead contained in micro-channel plates (MCP), which are devices that detect ionizing radiation, electrons, ions or Ultraviolet light. Microchannel plates are installed in equipment such as mass spectrometry, semiconductor inspection, surface analysis, etc., and the equipment are used in various fields such as medicine, measurement, analysis, and academic research.*

*Lead-free MCPs are currently in the stage of trial production / testing. JBCE predicts that the MCPs mentioned above can be replaced by lead-free MCPs by the end of 2026. We apply for renewal of the exemptions 3 and 39 for MCP to be valid until that time.”*

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.[[3]](#footnote-4)

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

# Questions

1. The applicant requested the renewal of the above exemptions of RoHS Annex IV with a slightly different wording (underlined) and scope until 2026.

*Lead in micro-channel plates (MCPs) used in equipment where at least one of the following properties is present:*

1. *a compact size of the detector for ionising radiations, electrons, or ions, where the space for the detector is limited to a maximum of 3 mm/MCP (detector thickness + space for installation of the MCP), a maximum of 6 mm in total, and an alternative design yielding more space for the detector is scientifically and technically impracticable;*
2. *a two-dimensional spatial resolution for detecting ionising radiations, electrons, or ions, where at least one of the following applies:*

*(i) a response time shorter than 25 ns*

*(ii) a sample detection area larger than 149 mm2*

*(iii) a multiplication factor larger than 1.3 × 103*

1. *a response time shorter than 5 ns for detecting ionising radiations, electrons, or ions*
2. *a sample detection area larger than 314 mm2 for detecting ionising radiations, electrons, or ions*
3. *a multiplication factor larger than 4.0 × 107 for detecting UV, ionising radiations, electrons, or ions*
   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.
4. 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.
5. 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?
6. 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).
7. 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 request available at <https://rohs.biois.eu/Ex_3+39-IV_JBCE_Renewal-Request.pdf> [↑](#footnote-ref-3)
3. Directive 2011/65/EU (RoHS) available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32011L0065:EN:NOT> [↑](#footnote-ref-4)