

In Brno, 17. 10. 2019

Opinion of the Commission of Conservators-Restorers of the Czech Association of Museums and Galleries on the conditions of use of nitrogen to eradicate insects from objects of cultural heritage

The method of controlled oxygen-free atmosphere uses nitrogen to reduce the oxygen concentration in an enclosed space (mostly in gastight boxes) to values at which killing of dangerous organisms occurs. This method belongs to long-term tested and recommended conservation technologies. (This type of treatment is also recommended pursuant to the national standard ČSN EN 16790 *Protection of cultural heritage – Integrated pest management*). It is an effective and secure method which is gentle in relation to materials and it is also environmentally friendly (it is environmentally benign). Currently, the method of controlled oxygen-free atmosphere with nitrogen is introduced in three Czech museum institutions. However, there is a real intention to spread this method also in other museums, galleries and libraries as a part of quarantine procedures related to protection of sensitive organic materials.

Following the effect of **Regulation (EU) No 528/2012 concerning the placing of biocidal products on the market and their use**, the International Council of Museums (ICOM) drew attention to the legislative and procedural restrictions of the use of nitrogen as a biocidal product (Appeal on the European ban on the use of nitrogen for disinfection, from September 2019). These restrictions have also a significant impact on integrated protection of cultural heritage against biological pests (integrated pest management). In accordance with Annex no 1 to Regulation (EU) no 528/2012 nitrogen is an authorised active biocidal substance which can be used only in limited quantities in connection with containers intended for immediate use. All biocidal products containing nitrogen as an active substance must be therefore authorised in accordance with this regulation for the purpose of making them available on the market and of their use.

The Czech committee of ICOM addressed in this matter the Czech Association of Museums and Galleries, registered association, (AMG), resp. its professional Commission of Conservators-Restorers of to give a professional opinion. For that purpose, a wider scientific debate of conservators-restorers and other specialists was conducted in collaboration with the legislative department of the National Heritage Institute and with the representatives of the department for chemicals and biocides of the Ministry of Health of the Czech Republic. The aim was to clarify to each other the real possibilities how to optimize the conditions of nitrogen use in cultural institutions. A negotiation between the representatives of the Commission of Conservators-Restorers of the Czech Association of Museums and Galleries and of the department for chemicals and biocides of the Ministry of Health of the Czech Republic¹ took place on the 15th of October 2019 in Prague. On the basis of that negotiation, it was recommended to proceed as follows:

- For the purpose of an operational solution of the situation in the Czech Republic, it is necessary to ensure a mutual recognition of the biocidal product „Rentokil N2 Controlled Atmosphere“ – which is so far the only authorised biocidal product in the EU suitable for The method of controlled oxygen-free atmosphere.
- For the purpose of supplementing the Annex no 1 to Regulation of the European Parliament and of the Council (EU) no 528/2012 with nitrogen as an active biocidal substance in

¹ In the Czech Republic, the lead manager in the field of biocides is the Ministry of Health of the Czech Republic.

connection also with "nitrogen generators in situ", an application of derogation according to Art. 55 (3) is not considered an appropriate solution². This is due to the fact, that this way requires a subsequent request for authorisation of a biocidal product (which a specific firm or a supplier must do and in addition, this derogation runs only for a limited period, normally 5 years), and it does not provide ultimately a simpler solution. In the respect of supplementing the Annex no 1 to Regulation of the European Parliament and of the Council (EU) no 528/2012 with nitrogen generators in situ, also a standard mode of a simplified authorisation procedure can be followed.

- In the light of the above, it seems desirable to initiate an increased demand by the ICOM members and the members of European museum associations and other associations which bring together institutions which create collections. This will attract interest of other potential suppliers and an extension of their scope in the supply of nitrogen as a biocidal product on the market (for example, the method of assessment of technical equivalents of individual products can be supported).

The Commission of Conservators-Restorers of the Czech Association of Museums and Galleries recognises that the current legislative framework related to the use of biocidal products is very restrictive for the purpose of a long-term care of cultural heritage.

Currently, the use of the method of controlled oxygen-free atmosphere in connection with containers intended for immediate use is possible only by a single foreign supplier. The economically and operatively more effective application in connection with nitrogen generators in situ is, in principle, not permitted in practice.

Since the mentioned technology of treatment of cultural heritage with nitrogen has several incontestable advantages (it can be used for the most types of collection objects, it is effective against all development stages of insect pests, it is simple, fast, affordable and it allows for applications in museum institutions and in institutions which create collections independently of private suppliers) and there is no suitable alternative to it, the Czech Association of Museums and Galleries, registered association, and its professional Commission of Conservators-Restorers AMG, in cooperation with the Czech committee of ICOM and with other subjects, as well as with support of the Ministry of Culture of the Czech Republic will endeavour to look for a durable solution.

The aim of the necessary change should be a re-classification of nitrogen as an active biocidal substance in order to protect the cultural heritage and a complete exemption of this safe and highly effective method from the contemporary legislative of biocides.

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² The application of derogation according to Art. 55 (3) of Regulation of the European Parliament and of the Council (EU) no 528/2012, concerning the placing of biocidal products on the market and their use, is recommended in the context of the declaration „Appeal on the European ban on the use of nitrogen for desinfestation“ by the International Council of Museums ICOM.

The opinion was carried out by:

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