

Nitrogen as a biocide?

Preventive conservation and IPM are a major concern of Museums, historic buildings, libraries and archives to effectively prevent damage by pests



Nitrogen is globally used for preservation of artworks, monuments and museum objects. There is **no equivalent alternative** in terms of preservation care and human health, for both staff and visitors of cultural heritage institutions.

The same applies to **human food**, as optimal solution for a safe and healthy preservation. **Nitrogen** may be used as preservative and food additive.



It is designated as **E941**.

Directive EU 2009/10/EC

Anoxia by Nitrogen owes its total effectiveness to absence of oxygen and not to biocidal activity of Nitrogen

Nitrogen is not a biocide!

and can't kill anyone

The completely unrealistic concept that Nitrogen is a biocide was established when the European Authorities issued the **Regulation 528/2012** including also the substance **231-783-9**. According to ECHA (European Chemicals Agency) the substance **231-783-9** represents the **pressurized nitrogen**, usually in cylinders at **200 atm**. High pressure cylinders can be very dangerous because they could accidentally release the compressed gas, saturating the environment and effectively eliminating the oxygen temporarily.

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THE OBJECT OF THE REGULATION 528/2012 IS THE PRESSURIZED NITROGEN

Usually, Nitrogen used in IPM is generated by the air by **Generators** able to separate Nitrogen from Oxygen usually through a **physical process**. Generation occurs at **ambient pressure and temperature** and the balance between oxygen and nitrogen during treatments is always the same, also if a human error occurs. Generators are usually very mobile, thus the maximum respect for objects becomes really possible and concrete.