SIMPLE AND INNOVATIVE DETECTION METHOD FOR ACETIC ACID

TECNOLOGIA PATENTADA

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RESUM

Researchers at the University of Alicante have developed a new method for detecting acetic acid using metal coordination compounds with metals that has significant advantages over existing techniques.

It identifies this substance specifically without reacting with other acids, it has a lower cost and is more reliable. In addition, the compound can be easily regenerated and reused.

Acetic acid is an atmospheric pollutant, commonly present inside buildings.

For this reason, its detection and quantification is very important for the prevention of risks to people and for the protection of other elements such as works of art.

AVANTATGES I ASPECTES INNOVADORS DE LA TECNOLOGIA

MAIN ADVANTAGES OF THE TECHNOLOGY

The advantages of the technology are as follows:

- Allows the specific detection of acetic acid and quantification of its concentration, discriminating it from other acidic compounds with which it may be mixed.
- Detection is fast, simple and intuitive, generating a visually appreciable colour change.
- Acetic acid can be detected in different media (in liquid, solid, gaseous phase or any combination of them).
- It is possible to regenerate the active detection medium through a simple process so it can be reused and therefore reduce the generation of consumables and waste.
- It has a lower cost compared to other methods currently used.
- Results are more reliable and simpler than electrochemical and enzymatic methods.
- It can be used by personnel without specialized training.

INNOVATIVE ASPECTS

The main novelty of the technology is the use of a coordination compound with metals that allows the presence of acetic acid to be detected and its concentration in the medium to be quantified quickly and easily.

Until now, there were no simple methods to detect this compound exclusively and the existing ones required complex analysis processes.

This method can be implemented in a detection device that is easily handled by any user. Detection is fast and very intuitive. In addition, the device can be regenerated and can be made available again for further analysis.

APLICACIONS DE L'OFERTA

The technology is useful as a contaminant detection system and in particular for the specific detection of acetic acid. This detection is very useful in closed spaces in work environments where the accumulation of this compound can be harmful to health.

It is also of great interest for the field of museology and heritage conservation since acetic acid can affect works of art.

The technology is useful for companies that need rapid and specific determinations of acetic acid in any type of substrate or in atmospheres in which acetic acid is a contaminant to be detected or quantified.

COL·LABORACIÓ BUSCADA

Companies interested in acquiring this technology for commercial exploitation are sought through:

- Patent license agreements.
- R&D project agreement (technical cooperation) to undertake projects related to technology.

Or companies or institutions that need to detect or quantify acetic acid.