

Fast detection of microorganisms using microcalorimetry

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Description

As a result of the joint efforts of the University of Vigo and the Galician Public Health Service (SERGAS), a reliable method and apparatus for the fast detection and identification of microorganisms in clinical samples utilizing microcalorimetry has been developed.

The new procedure involves the comparison of different parameters of a sample thermogram with a database from which the identification and quantification can be inferred. As a key part of the invention a novel mathematical treatment has been developed. This method has been implemented for the analysis of bacteria in several types of human tissues and the assessment was performed at the main hospitals in Vigo.

Innovative aspects and advantages

- This invention significantly shortens detection times, compared with the technologies used nowadays. A full assay can be run in 24 to 48 hours, allowing a selective antimicrobial treatment for infections with a short delay compared to the current techniques.
- Robust and easy to handle technique.

Commercial applications and potential users

Clinical assays has been performed in a prototype apparatus.

Potential users:

- Hospital and Research equipment providers.
- Diagnosis.
- Potential applications in biology, pharmacology, biotechnology and ecology.

Patent status

European Patent application.

Type of collaboration

Collaboration for further development and licensing of the technology are offered.

