

# NANOTUBE-BASED BIOSENSOR AND RAPID SAMPLE ANALYSIS METHOD



## Invention Definition

The invention includes a nanotube-based biosensor and an analysis method for the biosensor, enabling rapid on-site diagnosis. This invention, which allows integration with mobile devices, can detect the H1N1 (Influenza A/Swine Flu) virus, RSV (Respiratory Syncytial Virus), SARS-CoV-2 virus, and numerous types of bacteria.



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**Country**

**Application Number**

**Status**

Türkiye

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Searching

## Benefits

- Enables rapid and precise detection of target molecules/biomarkers for early diagnosis of diseases.
- Due to the molecularly imprinted polymer (MIP) incorporated into its structure, the biosensor maintains performance under extreme conditions, such as high temperature and humidity, and can be stored for extended periods.
- Allows detection of infectious agents, such as bacteria, viruses and fungi, from biological samples like blood, sweat, and saliva.
- Enables the detection of harmful substances, such as pathogens, antibiotics and hormones, using food samples.
- Suitable for detecting environmental pollutants using samples such as water and soil.

## Market Information

The global biosensor market is projected to reach \$55.8 billion by 2032, with a CAGR of 9.3%. The electrochemical biosensor market, which is the technical field of the invention, is expected to reach \$28.3 billion by 2032, with the Asian market showing a high growth trajectory.

## Target Market

The target audience includes biotechnology companies, hospitals, clinics, and health centers, as well as R&D organizations, the food industry, environmental scientists, and regulatory bodies, particularly firms operating under the specified NACE codes.



## Areas of Use

The invention is suitable for on-site and field use in areas such as hospitals, clinics, health screening points, and similar settings.



**Nace Code**

**Activity Definition**

72.11.01

Research and experimental development activities related to biotechnology.

## Commercialization Expectations

The aim is to facilitate technology transfer to firms identified as the target audience through patent licensing or assignment.

This technology transfer will be supported by industry-industry collaboration projects. As the invention is internationally patented, it is eligible for the TÜBİTAK T102 Patent-Based Technology Transfer Support Call. In the case of a potential technology transfer falling within this call, the client organization will be able to recover 25% to 65% of the fees paid for the patent.

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