



# Showcase by Sendot

## Design of the BACTcontrol for microLAN

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### Overview

#### The need

Develop low-cost, small and durable instrument to monitor microbiological activity in water.

#### The solution

In close collaboration with microLAN Sendot Research has realized cost and size reduction of the initial big and expensive instrument.

#### The Benefit

- Online enzymatic measurements
- Self-cleaning instrument
- Higher sensitivity

The BACTcontrol is an instrument designated for bacterial water quality monitoring. It is an “early warning system”, complementing the officially accepted methods for the detection of microbiological activity. The measurements are realized in a short period of time, 1-2 hours. This is in contrast to classical microbiological methods, which are labour-intensive and in which cultivation of the organisms is required, taking several days before obtaining reliable results (24-48 hours).

Sendot research has a vast experience with spectroscopy in general and fluorescence measurements more specific. MicroLAN asked Sendot research to design/develop the BACTcontrol. The heart of the BACTcontrol is a fluorescence detection unit so Sendot research had all the knowledge and experience necessary for this task.

The original instrument, the starting point of the project, was much too big and expensive. Sendot has downsized the complete instrument. Cost price reduction was obtained by reducing complexity, size and by making use of the proprietary FluoMini technology to detect the fluorescence which is produced when the specific bacteria are present. The final design as well as the software were done at microLAN in house.



*“We know that clients want quality for their money and we as a sensor manufacturer are deeply involved in this mindset”*  
A. Draaijer, General Manager Sendot Research B.V.

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