



# enverdi<sup>®</sup> BOD

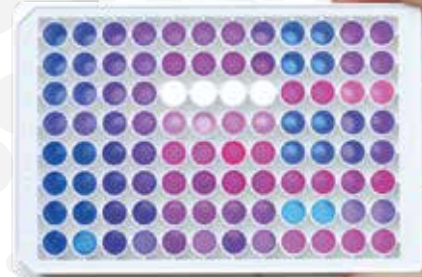


THE BOD REVOLUTION

## YOUR **BOD5 RESULTS WITHIN 48 HOURS!**

Patent WO/2006/079733

- High-throughput technology
- The first BOD5 method with results within 48h
- Same efficiency than reference methods
- Commercial seed compatible with Enverdi-BOD
- Dedicated standard bacterial seed



Throughout the last decades, the size of the environmental analysis market has been significantly increasing due to a growing public concern regarding natural resources conservation.

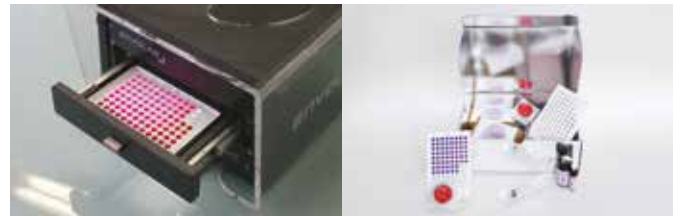
Consequently, operating in high-throughput conditions has become a pre-requisite for analytical labs to face the fast growing number of samples. Inspired by the impressive progress in bioanalytics, the company Envolure (AMS Alliance group) has developed an innovative high-throughput technology, which couples fluorescence detection and worldwide standard 96-well microplate format.

**BOD5** (Biological Oxygen Demand in 5 days) is a critical parameter for wastewater treatment monitoring. It is used daily to control the conformity of wastewaters released from urban and industrial treatment plants.

Envolure has developed and validated a strict surrogate to the reference method making it possible **to obtain BOD5 results in 48 hours** (versus 5 days) for many samples.

### ● ● ● **READY-TO-USE SOLUTION**

To simplify the BOD determination using the Enverdi method, we have developed a dedicated standard bacterial seed (OptiSeed). This ready-to-use solution, including Reagents + Calibration Standards + Microplate + Bacterial Seed + Fluorescence microplate reader, allows to secure and standardize your BOD tests.

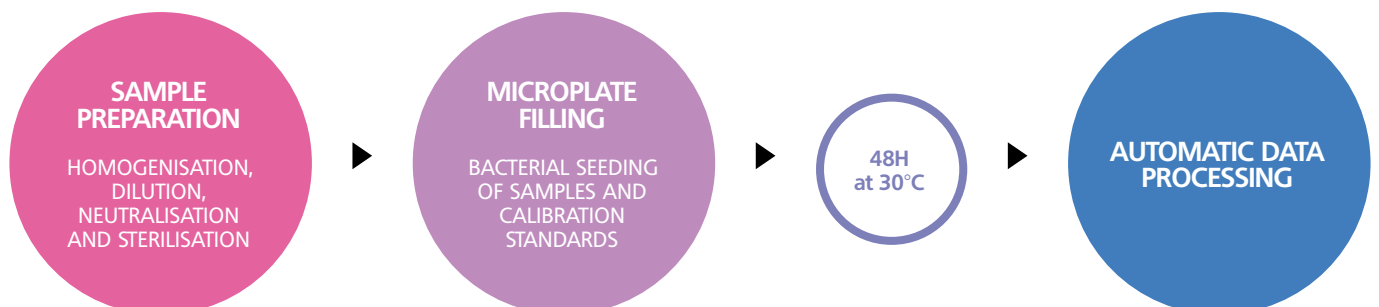


Ready-to-use solution: Fluorescence microplate reader + complete kit

### ● ● ● **THEORY**

This new product is based on the use of a bioreagent, which is chemically reduced in microbial cells during the aerobic mineralisation of organic matter, leading to an increase in the fluorescence signal. Fluorescence intensity, recorded throughout the incubation is directly proportional to the bacterial oxygen uptake required for this mineralisation process.

Definite results are reached after 48 hours of incubation at 30°C. The endpoint concentration provided by the Enverdi-BOD kit is directly expressed in mg O<sub>2</sub>/L, like for the reference method.

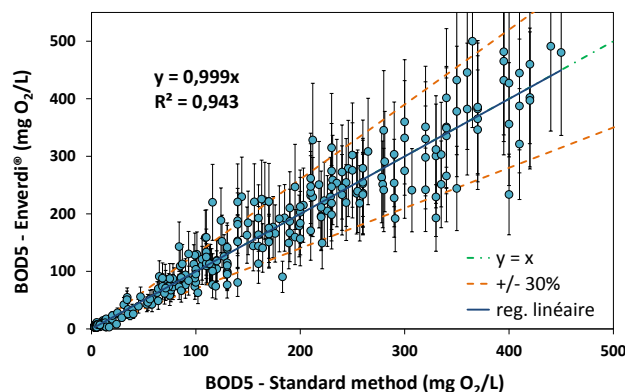




enverdi®  
BOD

## INTERNATIONAL VALIDATION

Enverdi-BOD has been validated internationally. This validation was performed jointly at the central lab of the Greater Paris Water Authorities (SIAAP, largest WWTP in Europe) and at the central lab of the Milwaukee Metropolitan Sewerage District (MMSD). The validation results comparing Enverdi-BOD with reference methods (EN NF 1899-1 in France and 5210-B in the US) have been published in Environmental Sciences and Pollution Research (Muller et al., 2014).



## REGULATORY EXPERIMENTATION IN FRANCE

In 2017, the French government have publish a special derogatory decree regarding the BOD5 analysis in municipal sewage treatment plants. This decree allows the French laboratories to experiment with the Enverdi-BOD method during a 2-years period, from September 2017. If the experimentation results are satisfactory, this innovative method could be fully and definitively allowed by French regulations.

## MAIN ADVANTAGES

<b>FAST</b>	Analytical results obtained in 48 hours.
<b>PROFITABLE</b>	The microplate format provides a sharp decrease in analytical costs, up to 3-fold.
<b>HIGH-THROUGHPUT</b>	One kit enables to perform up to 80 BOD5 (no replicates) or 40 (with duplicates).
<b>UNIQUE</b>	Unique analytical tool for regulatory analysis and WWTPs' operation monitoring.
<b>MINIATURE</b>	Incubation takes place directly in the fluorescence reader, bench surface less than 1 m².
<b>SIMPLE</b>	45 minutes are required to prepare 40 duplicated samples, which is 5 to 10 times faster than the conventional method.
<b>AUTOMATED</b>	Data recording and processing are fully automated.
<b>READY-TO-USE</b>	Ready-to-use solution including reagents - calibration standards - microplate - bacterial seed - fluorescence microplate reader



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