

Preserve your bathing water quality with XplOrer64™ System (Bio-Rad)



The first automated method certified AFNOR Validation

Sunny days are coming and the new 2010 bathing season is being organized. Bathing water quality has become in the last few years a **major concern** for the tourist development of the seaside communities.

The **control** of this bathing water quality is based both on the knowledge and monitoring of the environmental context and potential sources of pollution and on reduced analyses of the two fecal contamination microbiological indicators (*Escherichia coli* and intestinal *Enterococci*).

The new sanitary quality criteria set by the new 2006/7/EC Directive are more **demanding** than those used today (**tightening** of thresholds), which should lead to a reduction in the risk for a bather to contract an **ENT**, digestive or **respiratory** illness. However, the principal **advance** proposed by this new regulation **lays** in a change in the mode of management, from a simply analytical estimate of the quality to a **true** active management of bathing areas, a process in which the Mayor of the community where the beach is located will have a central role. Due to this increased responsibility, the Mayor needs simple and reliable decision-making assistance tools, predictive of the sanitary risk, in order to guide his/her management actions.

However, the analytical method currently used in France, the standardized MUD/MUG microplates method, only provides results within 2 to 3 days (!), which is not satisfactory for the active management **problem** of this new operational approach **entrusted** to the seaside **town authorities**.

One day to know

Anticipating the guidance need of **town authorities** in the management of crisis situations, Bio-Rad has developed a compact automaton, the **XplOrer64™ System**, and a **CheckN'Safe™** reagent range to assess in **real-time** with **continuous loading** up to 64 samples simultaneously, for a **result within a few hours: the higher the level of microbiological pollution, the faster the results are obtained.**



XplOrer64™ System

XplOrer64 thus allows determining within a day if the quality of water complies with bathing standards or if the beach needs to be temporary closed. It allows also deciding rapidly on a beach re-opening following a short term pollution (spread by the wind, currents or tides...) or to demonstrate the absence of impact of an accidental event.

Demand a double certification!

After a successful beta-site trial performed in the summer of 2008 at the Var Departmental Laboratory in Toulon (south of France, Mediterranean coast), the XplOrer64 method was thoroughly assessed at the Pasteur Institute of Lille in order to obtain the certification from the AFNOR Validation organization, a **guarantee** of the reliability of the results for the user laboratories and for decision makers.

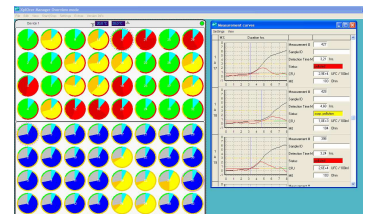
The aim was to assess the XplOrer64 method performances in comparison with the miniaturized MPN methods of EN ISO 9308-3 standard for *E.coli* counting, and EN ISO 7899-1 for intestinal *Enterococci* counting, in bathing water matrices (fresh and sea waters). The performances (expressed using characteristics such as selectivity, specificity, accuracy, linearity, repeatability, reproducibility, robustness, detection and quantification limits) and the results obtained in the inter-laboratory study were reviewed by the Technical Committee from AFNOR Certification, composed by microbiology experts representing users, technical organizations and kit manufacturers.

Performances of the method were satisfying, and the statistical analysis of the results allows to demonstrate that the results are equivalent ($\alpha = 0.05$) on both fresh and sea waters, for each of the two parameters. XplOrer64 method is therefore **the first alternative method certified twice by AFNOR Validation for bathing water monitoring**, allowing a reliable enumeration of *E.coli* or intestinal *Enterococci*.

The prevention tool of choice

Complementary to the regulated monitoring **carried out** by the Water Offices, the XplOrer64 method constitutes an excellent tool to decide on immediate actions to **be carried out** in bathing areas or shellfish farming monitoring, and presents a high interest for the preventive management of media and economic risks.

It is therefore perfectly suitable for the French auto-control monitoring program recommended in the new of "Bathing Water Quality" certification guideline.



XplOrer64™ shows you all in colors!

The simplicity, speed and reliability of the method are the key benefits of the method chosen by SAUR Group*, which started implementing the method in its seaside offer in Western part of France in the summer of 2009. For the seaside **town authorities**, XplOrer64 allows informing bathers every day on the beach water quality, providing a positive image in terms of environmental respect and public protection. The IFREMER** laboratories network in France also chose this method to follow the water quality in shellfish farming.

Bio-Rad, already leader in Europe

In Europe, Bio-Rad comforts its leadership position on bathing water monitoring with its microplates offer and the XplOrer64 method unmistakably comes to strengthen its position on a market which is currently in transition.

Facing the 2009 commercial success, Bio-Rad is currently looking to extend the XplOrer64 applications to waste water treatment plants and network tap water... A promising future.

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