

BM-Advance2 for A2A Ciclo Idrico – Italia



BM-Advace2 – Double reactor

The company [A2A Ciclo Idrico](#) is one of the most important companies in Italy related to the integral cycle of municipal and industrial water. This company includes a wide field of activities such as research, collection, treatment, energy optimization, among others.

Likewise, A2A Idrico Cycle distributes drinking water in the municipality of Brescia and in numerous municipalities of the province.

A2A Ciclo Idrico also manages the sewerage system of Brescia and the municipalities it serves in the province, which consists of 2,186 km of network and 221 lifting stations.

The main wastewater treatment plant managed by A2A Ciclo Idrico is located in Verziano (Brescia), is connected to the sewerage network of the city and some neighboring municipalities and its treatment capacity is 250 thousand equivalent inhabitants. In addition to the Verzano treatment plant, A2A Ciclo Idrico manages another 57 plants.



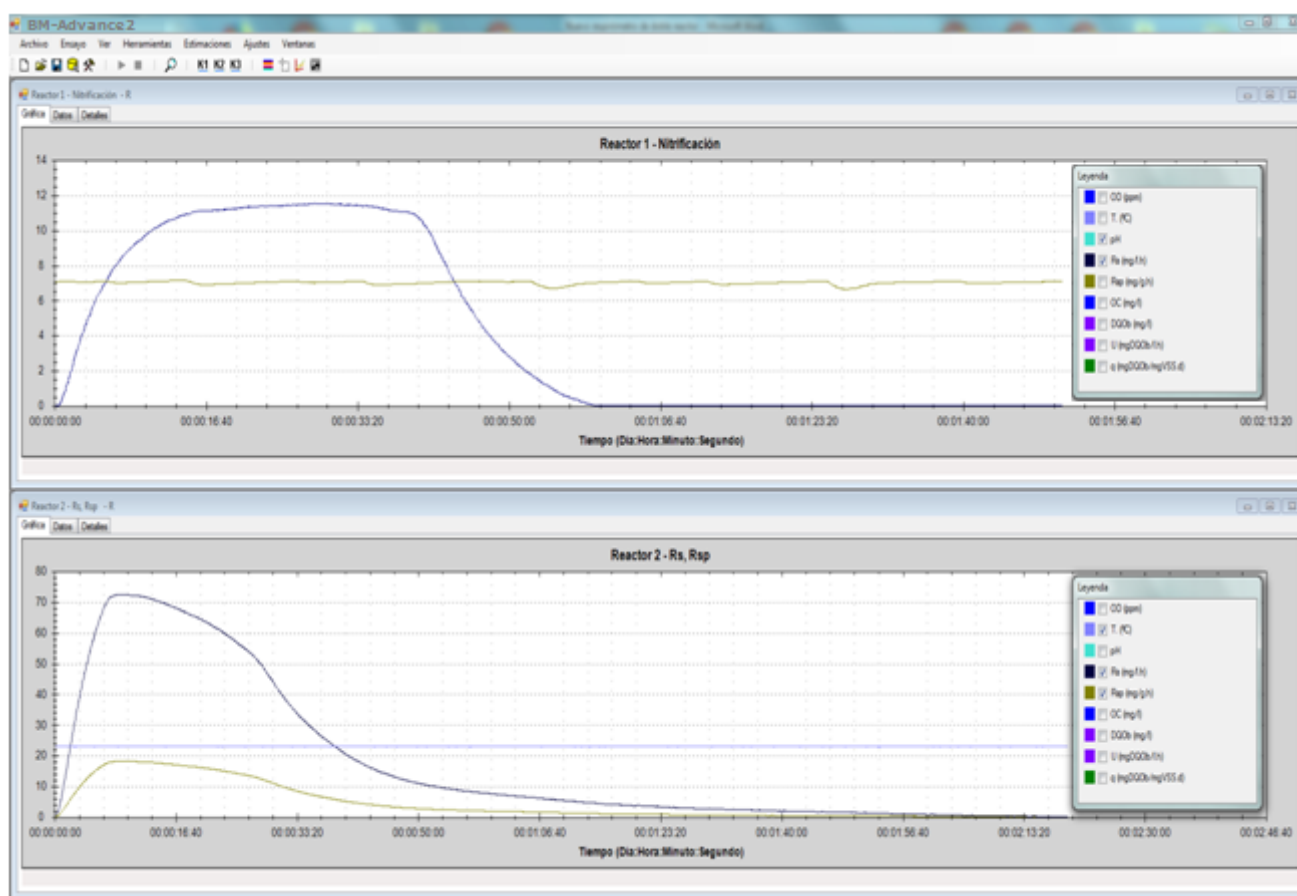
Sede central de A2A en Brescia (Italia)

A2A acquires this double-reactor respirometry system by direct communication from A2A's laboratory manager with Surcis.

In this operation, the capacity of the system to generate test files and the option of its automatic conversion to Excel documents were positively valued. But above all, probably the highest assessment was obtained from the references of Surcis and the verification of the important technical support that Surcis is offering in the operation of BM analyzers and in [Respirometry applications](#).

The [BM-Advance2](#) is equivalent to a double analyzer model BM-Advance in a single module, which is governed by a single computer equipped with two software units (one for each reactor)

This system of two reactors allows a substantial saving of time thanks to the possibility of performing two tests simultaneously in identical or different conditions of pH, Oxygen, Temperature and Sample Volumes, with the possibility of setting one of them as a reference.

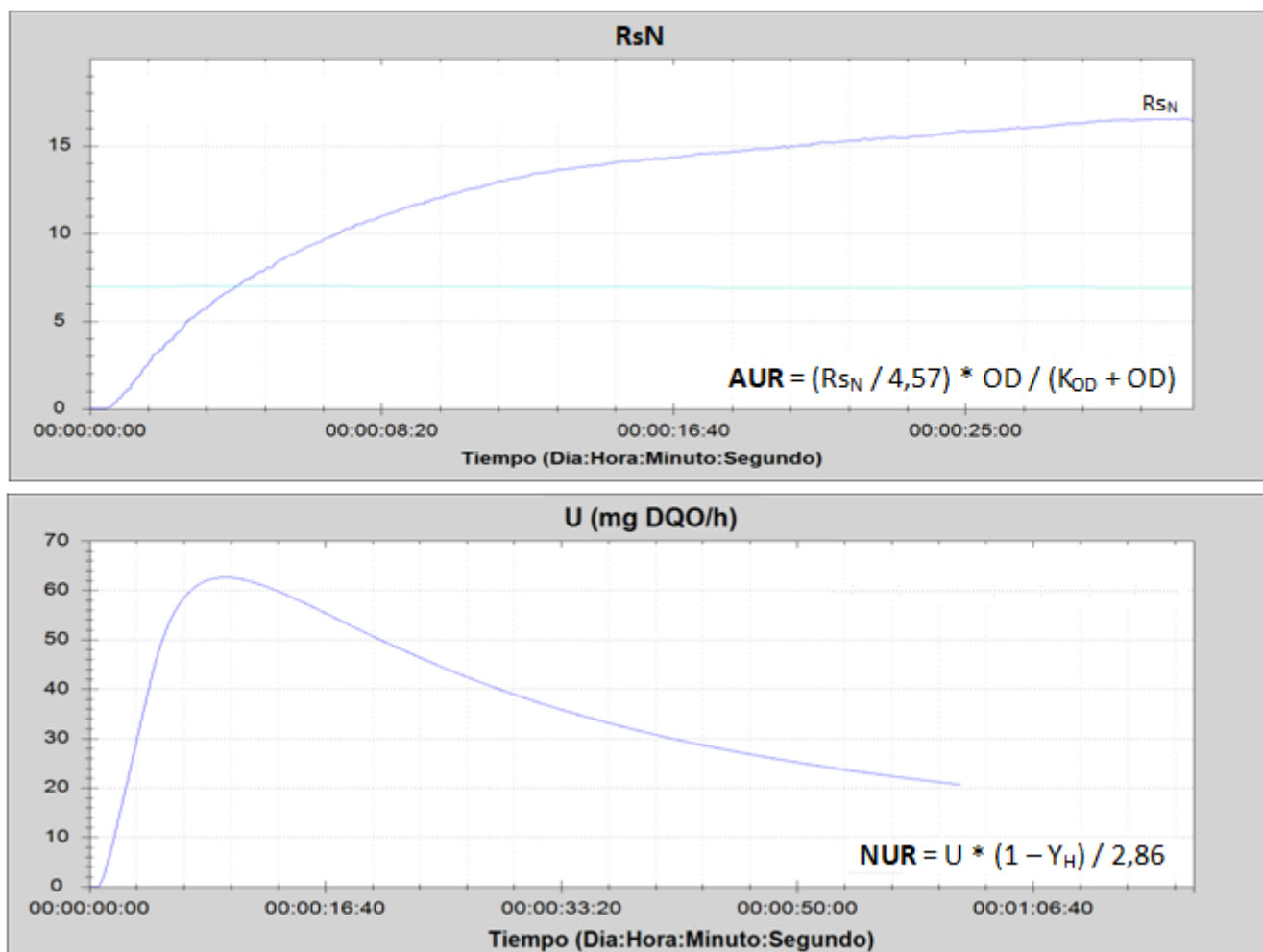


Respirograms from each reactor simultaneously displayed

This opens the possibility of expansion to the already wide range of applications that can be developed with Surcis [BM Respirometry Systems](#).

Applications of interest

Among the applications of Respirometry, A2A is particularly interested in the unique way in which, from the results of the tests carried out with the BM-Advance2, a series of parameters related to the biological removal of nitrogen can be determined.



Respirograms for biological Nitrogen removal in the BM-Advance2

With the values of the AUR, NUR, and COD of start, we obtain the necessary tools for the in-depth analysis of the process aimed at the biological elimination of nitrogen with the following parameters:

Nitrification				
Nitrification rate AUR (mg N-NH4/L.h)	Specific AUR SAUR (g N-NH4/gSSV.d)	Minimum oxygen OD_{min} (mg/L)	Sludge age MCRT (d)	Active nitrifier conbiomass X_N (mg/l)
Desnitrificación				
Denitrification rate NUR (mg N-NO3/l.h)	Specific NUR SNUR (gN-NO3)/gSSV.d)	COD - denitrification DQO_{DN} (mg/l)	Hydraulic r.time TRH_{DN} (h)	COD removal rate U (DQO/h)

This acquisition demonstrates once again that leading companies and groups in the management of the integral water cycle are selecting Surcis' BM Respirometry Systems for their laboratories for the purposes of management, design and research of municipal and industrial wastewater treatment..

SURCIS, S.L.