Online ad in-situ nutrient water quality monitoring: technology overview and applications

Dr. Ing. Luca Sanfilippo
Project Manager
Marketing manager
µLFR technology and its application for nutrients monitoring in water

WIZ (Water In-situ analyZer): In-situ automation of lab analysis

Micromac-1000: Compact online analyzer for Ferrybox applications

- Multiparametric
- High sensitivity
- Low reagents consumption
- Enhanced reliability

Project WARMER: field test in Venice lagoon (Palude di Cona - VE, July 2009)
The micro Loop Flow Reactor

Source: BOKU Vienna, project WARMER
http://www.projectwarmer.eu
Ferrybox applications with Micromac nutrient analyzers

AWI-BAH (Helgoland) 2005

Marine Institute Tallinn 2007

MUMM (Belgica) 2011

NIVA (Color Fantasy) 2019
WIZ TP&TN first installations

WIZ TP, TOP and PO$_4$ in alpine lake catchment, University Salzburg, Austria (2014)

WIZ TN and WIZ TP+NH3 in Taihu lake, P.R. China (2011)

WIZ TN and WIZ TP in Zhuhai lake, P.R. China (2010)
Zhejiang fishery water quality monitoring network, P.R. China (2012-2015)

20 WIZ nutrients in-situ probes are in operation in this water quality monitoring network
Nutrient Sensor Challenge (2016):
I field test in Maumee river (OH)
II field test at CBL, Chesapeake (MD)
Nutrient Sensor Challenge: III field test in Hawaii
ASLO conference in Hawaii, 02/03/2017

SYSTEA awarded for both Nitrate and Phosphate sensors!
WIZ installations in North America

WIZ NO$_3$ and PO$_4$ in Merrimack river, Lawrence MA, USA (2017)

WIZ NO$_3$ and PO$_4$ in William H. Harsha lake reservoir, USA (2017)
Four WIZ probes + WIZbuoys
Lake Erie, Canada (2018-2019)
Our target Customers

- Environmental Protection Agency for eutrophication control in lakes and water reservoirs
- Universities and Research Institutes for environmental control of surface water and coastal areas

Micromac-1000 and WIZ are recognized standards for online and in-situ nutrients analysis in surface and coastal water.

http://www.systea.it
info@systea.it

+400 in-situ probes already manufactured!