

Turbidity monitoring of finished drinking water in compliance with the European Drinking Water Directive

Problem

A brackish water desalination and drinking water production site in Spain, BWDP Racons operated by Aqualia, produces finished drinking water for their area. On 23rd December 2020, a new EU Drinking Water Directive 2020/2184 was published, giving 2 years to all EU members for adaption.

3 important points affecting and challenging the parameter Turbidity:

- Reference turbidity value at the DWTP is 0.3 NTU in 95 % of samples and none exceeding 1 NTU
- Uncertainty of turbidity measurement is 30% maximum
- 1 NTU becomes a critical value for uncertainty estimation and process validation



Solution

The Hach[®] Drinking Water Panels are easy to operate plug-and-play solutions. The panels support the control of many different parameters which are important for drinking water.

A turbidity monitoring panel was installed at the finished water sample line of the drinking water plant. The installed sensor is a TU5300sc Turbidimeter with innovative 360° x 90° Detection technology.

The TU5300sc only requires cleaning every 1-3 months, while other maintenance tasks can be performed annually or as needed. Prepared standards in adequate values for calibration and validation, even in low turbidity values (0,3 NTU; new sealed 1 NTU vial).

Objective

Process monitoring & regulatory compliance

Parameters

- Turbidity

Integrated system consisting of

- Drinking Water Panel
- 1 x TU5300sc Turbidimeter
- SC4500 Controller



Benefits

By adopting turbidimeters with 360° x 90° Detection technology, which requires less cleaning and maintenance, the plant could significantly reduce their management costs, while utilising innovative measurement technology to provide accurate results.

Details & Components, Drinking Water Panel

1. Service bracket
2. Flow sensor
3. TU5300sc Turbidimeter
4. SC4500 Controller

