

Measurement down to 0.02 mg/l PO₄-P

PHOSPHATE ANALYZER ALYZA IQ PO4

The sale of our new Alyza IQ PO₄ for the IQ Sensor Net has started in August 2019. And of course we do not want to withhold the first impressions from you. Whether Single or dual channel version - the wet chemical analyzer convinces with exactly measured values, low operating costs, easy handling and the clear display of the user interface. Read it yourself:

Satisfied customers in Poland

“We decided to choose the Alyza analyzer due to its very low operating costs and ease of use. Compared to the laboratory results, the Alyza performs very well. Thanks to the obtained results, we will be able to better monitor wastewater for phosphorus and automatically control the dosage of chemistry. There should be many benefits associated with operating a sewage treatment plant.”

We received this feedback from the wastewater treatment plant operator of the Polish city of Skarszewy, about 40 kilometers south of Gdansk (Figure 1). The plant saves high costs, on the one hand by not having a service or maintenance contract, as the customer can do almost everything himself, and on the other hand by the savings in precipitant dosing.

Field service on tour - Bückeberg

Our sales representative in Lower Saxony Marcus Nickel operates a “measurement trailer” with pre-assembled devices, with which he can quickly and easily measure on site at customer seminars or test sites (Figure 2, 3). The analyzer can be transported directly to the basin, and the maximum suction line length of 20 meters does not have to be used to its full capacity. Commissioning is particularly fast.



Figure 1: The Alyza IQ PO4 on the Polish plant of the city of Skarszewy (near Gdansk).



Figure 2, 3: Our sales representative Marcus Nickel and his measurement trailer at the Bückeberg sewage treatment plant

The fitting of the new Alyza IQ PO₄ into the measurement trailer was one of the first measures after launching it.



Figure 6: The Alyza IQ PO₄ at the Weilheim wastewater treatment plant

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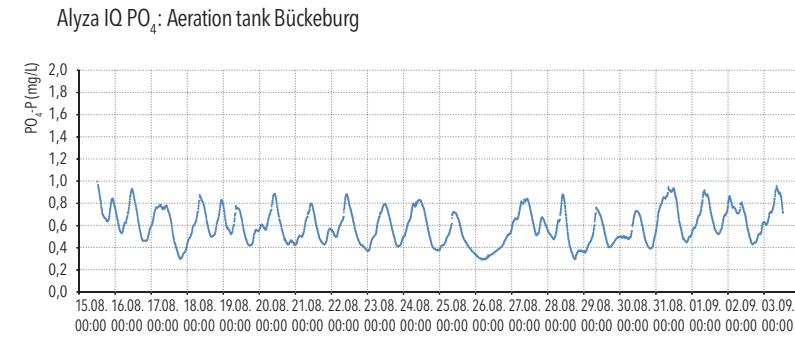


Figure 4: PO₄ graph of the effluent values of the wastewater treatment plant Bückeberg

The graph in Figure 4 shows the course of the measured values of a single-channel device over a time period of approximately one month (15.08. to 04.09.2019). The Alyza IQ PO₄ records the measured values in the outlet of the activated sludge tank.

Weilheim sewage plant

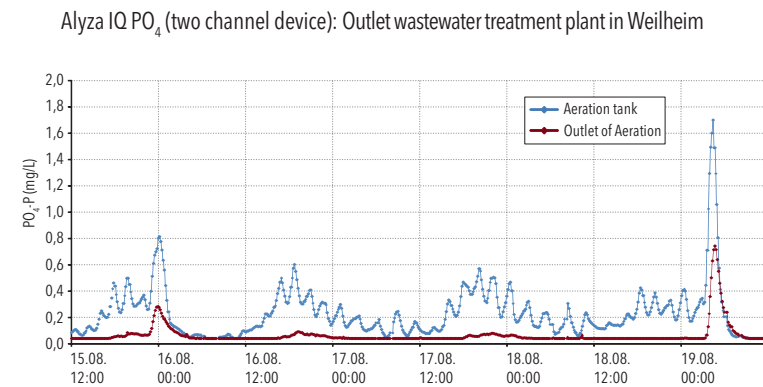


Figure 5: PO₄ graph of the activation at KA Weilheim

Figure 5 shows the measured values of a two-channel device over a period of four days at the WWTP Weilheim. The blue graph in the animation clearly shows the intermittent ventilation and the more strongly fluctuating PO₄-P concentrations compared to measurements in the outlet of the activated sludge tank (red). After the dosing of precipitant there are usually only very low concentrations left in the outlet.

However, as soon as there is a large increase of PO₄-P with the inflow to the activated sludge tank, it is possible that the peak breaks through to the outlet of the tank. These increased values are compensated by the subsequent clarification and finally eliminated by a sand filter. Consequently, at the outlet of the sewage plant, there is practically no PO₄-P present anymore, even though higher concentrations may be reached during biological treatment. The Alyza IQ PO₄ is here also installed as a test station.

Laboratory measurements for verification

Like our process sensors, the Alyza IQ PO₄ is verified in the laboratory with standard test sets and the photometers of the photoLab® or pHotoFlex® series. We use the WTW test sets P6/25 and P7/25 as standards, which operate according to the blue method. Alyza IQ PO₄ uses the so-called yellow method and offers an optimized elimination of Interference. For this purpose, the sample blank value is automatically determined for each sample. In addition, the so-called Reagent B for optimized background compensation of yellow-colored water samples can be added. The yellow coloration usually indicates a high concentration of humic acids. Depending on the nature of the sample and sample location, further optimization can be achieved by selecting between automatic one-point and two-point calibration. As laboratory measurements have shown, we can conclude that with the combination of these options and using the yellow method, excellent measurement accuracy can be achieved.

Clear display of measurement values of the Alyza IQ PO₄

In addition to the low reagent consumption, easy handling and accurate measurements, the Alyza IQ PO₄ also convinces with a clearly arranged menu. Figure 7 shows the measured value overview of a two-channel device. The measured values of the two channels, the time of the measurement and the sensor name (here both times the serial number) are clearly displayed. Below this, either the current process (here: measuring) or an info when the next measurement, the next automatic calibration and the next automatic cleaning will take place, is shown.

Alyza and the boss

On August 22nd 2019, Xylem Analytics Germany received a visit from the top management: the company's CEO, Patrick Decker, informed himself on site about the current state of affairs in Weilheim.

In addition to getting to know the local management personally, the focus was of course on the far-reaching investments in the new company facilities in the Achalaich industrial estate. Here, the company's new research, production and logistics centre was built on a 27,000 m² plot of land.

Patrick Decker also found out about the company's latest products, with particular attention paid to the phosphate analyser Alyza IQ PO₄.

A visit to the Weilheim wastewater treatment plant gave him the opportunity to observe the running analyzer, which is mounted on one of the plant's aeration tanks for test runs, in its "natural environment" so to speak. Subsequently, the series production of the analyzer was inspected at the plant, which is now fully operational after a very demanding development phase.

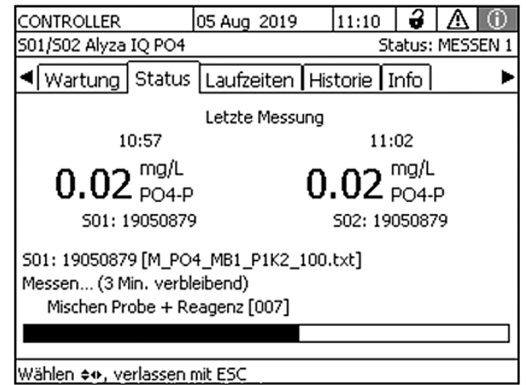


Figure 7: Display of the Alyza PO₄ during measurement

Do you have further questions?
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