Water Industry Operators Association of Australia
Submission of Abstract

The Best of Both Worlds: Synergy of Colorimetric and Amperometric Chlorine Measurement in Parallel

Abstract
The comparative analysis of colorimetric and amperometric technologies for chlorine measurement in water treatment processes has revealed distinct advantages and limitations for each method. Colorimetric techniques offer higher accuracy and stability across various sample conditions, while amperometric sensors provide continuous, reagent-free measurements with faster initial response times.
This research has highlighted that the choice between these technologies should be based on specific application requirements, considering factors such as desired measurement frequency, sample conditions, and maintenance capabilities. The findings suggest that neither technology alone can fully address all the challenges faced in diverse water treatment scenarios.
In response to these observations, recent developments in the field have led to the exploration of hybrid systems that aim to combine the strengths of both technologies. One such development is the RMC Disinfection panel, which integrates colorimetric and amperometric measurement techniques. This approach attempts to leverage the higher accuracy of colorimetric methods while incorporating the continuous monitoring capabilities of amperometric sensors.
The emergence of hybrid solutions represents a potential advancement in chlorine measurement technology. These systems aim to provide a more comprehensive approach to chlorine monitoring and control in water treatment facilities. This study underscores the importance of continued innovation in water treatment technologies, driven by a thorough understanding of the strengths and limitations of existing methods. As the field evolves, it is crucial to maintain a focus on developing solutions that can adapt to the diverse and changing needs of the water treatment industry

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