



CASE STUDY: MELBOURNE WATER FLUORIDE LEVELS

A more measured world of water

Balancing fluoride, flawlessly

Melbourne Water, Australia

In Melbourne, Australia, as in many other parts of the world, fluoride is added to public water supplies to improve dental health. Melbourne Water is responsible for ensuring fluoride levels are correct in the more than 400 billion liters of water it supplies annually to customers. If fluoride levels are too high, the results can be hazardous so precision analyzers are required to ensure fluoridation levels are carefully monitored and controlled.

A healthy balance

Studies show that low concentrations of fluoride in water can help to reduce incidences of tooth decay. However, doses above 1.5mg/l have been linked to medical disorders such as dental and skeletal fluorosis and osteoporosis, so there is certainly a balance to strike. Melbourne Water needed a reliable way to accurately measure and control the fluoride levels to avoid harming customers.

A problem of process

Accurately monitoring fluorosilic acid (FSA) levels is challenging. During the fluoridation process, ambient temperature changes are common and this can lead to drift in levels. Also, Melbourne Water used a competitor's fluoride monitors which required a great deal of maintenance. Melbourne Water wanted to a solution that would provide the highly accurate readings they needed to ensure they were in complete control of fluoride levels, but it also had to be easier to maintain so they could reduce maintenance time and drive down costs.



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Made to measure solution

ABB has a proven track record for supplying high performance measurement solutions to the water industry. Following successful projects with other water authorities, Melbourne Water turned to us. Our solution included a specially designed 261GR FSA level transmitter which helped eliminate drifts in fluorosilic acid levels due to ambient temperature changes.

ABB also provided AFM631 fluoride monitors which were easy to use, highly effective and required less maintenance than the competitor's products. Since adopting the AFM631, as well as improving process efficiency, Melbourne Water has significantly reduced maintenance costs too.



ABB offers the whole package when it comes to FSA applications. Our proven technology can help you achieve better performance, decrease maintenance liabilities and reduce costs.