Development of surrogate organic contaminant parameters for source water quality standards in taiwan

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摘要.

Abstract

The objective of this research was to develop a rationale for selecting representative water quality parameters for organic contaminants and microorganisms and determining their respective contaminant level (or regulated value) for the source water quality standards in Taiwan. It was observed that chemical oxygen demand (COD) and total organic carbon (TOC) have strong correlation with UV254 in spite of the raw water which suggests, TOC and COD should be regarded as the surrogate parameters for water quality concerns. It was also proposed to implement 4.0 mg/L of TOC as a source water criteria at the present time and to adopt a more stringent value (2. 0 mg/L of TOC) in the next phase (at 2002). The total coliform regulated from 10,000 to 20,000 most probable number (MPN)/100ml level appears to be the most economic and logical way to control trihalomethanes (THM) formation and disinfection efficiency at the water treatment plant in Taiwan.