

Proper Management of Residual Chlorine Concentration in Tap Water for Reduce Chlorine Odour

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Abstract

In Japan, there is a culture of drinking tap water as it is. In order to respond to consumer needs for safe and better-tasting water, the Tokyo Metropolitan Government is making daily efforts on water quality control with a quality target which is more demanding than the standards set by the national government. In particular, for residual chlorine that causes chlorine odour, the target range is set at 0.1mg/L - 0.4mg/L for tap water to avoid smelling of disinfectant chlorine while keeping a sufficient disinfection effect. Throughout the large service area in which water is supplied from multiple water purification plants through a complex water distribution process, various efforts have been taken to control residual chlorine, which decreases over time, within our target range. The main efforts are in such as installation of the advanced water treatment, additional chlorine injection at the water supply station, replacement of aged pipes. As a result of these efforts, the target achievement ratio has been significantly improved from around 40% in FY 2004, when the target was set, to around 90% in FY 2015. In the main issue, these respective specific effects realized from each effort are stated.

Keywords: chlorine odour; residual chlorine; tap water quality management; advanced water treatment; additional chlorine injection