THE INFLUENCE OF UV ON SWIMMING POOL CONTAMINANTS

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Abstract

One of the main goals of pool water research is improving the health of swimmers. In the beginning it was all about improving disinfection chemistry, and later we learned about the formation of disinfection by-products. It took a while before we understood that some of these DBPs were in fact unhealthy. For example, chloroform, a common DBP in swimming pools, has been used for a century for anaesthetics by medical experts, while nowadays it is assumed to be carcinogenic to humans. Even now we still identify new DBPs and our knowledge on the effects on human health is growing, but we are still swimming partly blind. It is because of that, that we sometimes make misinterpretations off scientific results. So every now and then we need to look back at our scientific history to reflect previous results with current knowledge.

In this presentation I would like to discuss the use of UV for removal of contaminants. Some scientific results showed that the formation of chloroform increased after implementation of UV, while others report a decrease. An increase of chloroform suggests that reactivity of contaminants increases with the use of UV. But what happens in the long term when reactivity increases? What is the influence of UV on the release of contaminants by swimmers? Or can the difference be explained by the difference between LP and MP UV?