Effects of UV/H2O2 process conditions on Ames fluctuation assay response

Effect of process parameters
Effect of membrane filtration
Concentration of NOM: some loss of small acidic compounds
No significant difference in behaviour in Ames fluctuation assay between original and filtered water

Effect of nitrate concentration (mg NO3/L)

Conclusions
• Only effects by use of MP lamps
• Byproducts result from reaction of products photolysis of nitrate and NOM
• UV dose, H2O2 concentration, nitrate concentration and TOC explain at least 80% of effect in Ames Fluctuation assays

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