

Interactive comment on “De-chlorination of drinking water by forced aeration” by Ghanim Hassan and Robert G. J. Edyvean

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All the comments were taken into consideration. Please see the attached file.

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De-chlorination of drinking water by forced aeration

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9 Key words: De-chlorination, Drinking water, Aeration.
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Abstract

12 Shock chlorination is a well-known practice in swimming pools and domestic wells. One of the
13 limitations for using this technique in drinking water purification facilities is the difficulty of
14 quickly removing high chlorine concentrations in water distribution systems or production
15 facilities. Forced air bubbling is a possible technique for de-chlorination but there is lack of data
16 supporting such a process.
17 A 20 cm diameter, 1-meter height column provided with air sparger was designed to collect the
18 desired data were used.
19 Shock de-chlorination by aeration is found to be a promising method that opens up the horizon to
20 drinking water industry to produce microorganism and disinfectant free drinking water.

1. Introduction

22 Chlorination of drinking water has been used as a disinfection technique for more than a century
23 or so to produce water that is safe from waterborne diseases. This method is preferred due to low
24 cost, abundance, ease of use and less need of high technology equipment. On the other hand, during
25 the last forty years disinfectants by-products "DBPs" as an emerged branch of reality in the water
26 industry has developed first by discovering the presence of Chloroform (Rook, 1974) and
27 trihalomethanes "THMs" (Singer, 1994) in drinking water. To date some 700 or more DBPs have
28 been identified but understanding their effect on humans and the environment still needs more
29 work (Brown et al., 2011; Gonsior et al., 2014; Richardson and Postigo, 2015).

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