

Interactive comment on “Bio-purification of drinking water by froth flotation” by Ghanim Hassan and Robert Edyvean

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All the comments are taken into account.

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Discussion paper



Bio-purification of drinking water by froth flotation

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Abstract

Recently, a process was developed for continuous removal of bacteria from water using the principle of froth flotation through compressed air only without any chemicals (Hassan, 2015). This work examines the extent to which chemical free froth flotation can purify drinking water.

The experiments were carried out using two flotation columns with different column heights, each equipped with ceramic air sparger. Raw water containing bacteria was fed into the column from the top. Air was pumped through the water enough to produce a froth which separated the bacteria and, when removed, the bacterial content measured.

The results show that the bacterial concentration can be reduced by 55% of its original concentration under the optimal experimental conditions so far found. This suggests that the technique can be used as a pre-purification step to minimize the use of disinfectants; hence their byproducts, and to control biofilm growth.

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