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Drinking Water Engineering and Science Discussions

Interactive comment on "Removal of radio N-nitrosodimethylamine (NDMA) from drinking water by coagulation and Powdered Activated Carbon (PAC) adsorption" by J. Chung et al.

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The study by Chung et al. investigated the removal of NDMA by PAC, coagulation, and biosorption. For this study, a radio-labeled NDMA was used at a very low initial concentration. I found that this study has provided very careful/detailed NDMA determination procedures by using a liquid scintillation counter. This information is useful for other researchers who will use radio-labeled compounds, since many researchers often follow previous detection methods without developing their own detection procedures in radio-labeled compound use. In addition, their findings are quite interesting, especially with PAC although the NDMA removal is not significant as expected due to its low hy-

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drophobicity. I believe that the results are still valid in NDMA water treatment, since not many previous studies have been conducted for NDMA removal by coagulation, PAC, and biosorption, especially at very low concentrations (\sim ng/L). This manuscript can be published with a few minor revisions:

1. Q: Abstract- Authors have focused on NDMA detection method development with a relatively small portion of NDMA removal. Abstract can be stronger by expanding NDMA removal part. A: Thank you for the comment. We have revised Abstract as suggested.

2. Q: Conclusion - 'Although insignificant NDMA removal results were obtained in this study, these results verify : : :: : NDMA even at an extremely : : :' does make sense. This sentence needs be rewritten. A: We have revised the manuscript. 'In addition, it was observed that the removal of NDMA by biosorption was insignificant at the limited conditions, indicating that biosorption may be an ineffective mechanism for removing hydrophilic NDMA even at an extremely low initial concentration (100 ng/L).'

3. Q: Figure 7- I see this figure is not consistent with the others based on its font and font size. Make all consistent. A: We have revised the figure as suggested.

4. Q: This manuscript can be improved by English speakers' review – strongly recommended. A: The manuscript was reviewed by a native English speaker.

Please also note the Supplement to this comment.

Interactive comment on Drink. Water Eng. Sci. Discuss., 2, 79, 2009.



Fig. 1.

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Fig. 2.



Fig. 3.

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Fig. 4.



Fig. 5.

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Fig. 7.

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