

Interactive comment on “NOM characterization and removal at six Southern African water treatment plants” by J. Haarhoff et al.

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General Comments This paper represents research on NOM removal at six Southern African water treatment plants, and the importance of NOM characterization to be able to explain phenomena during treatment of different water types. However the research is limited to the area of South Africa, the results and conclusions are of that importance that it should be published internationally. It is difficult to choose the right NOM characterization method, you never know on forehand if it will discriminate the relevant fractions. But this publication tells us that, if you make the right choice, one becomes able to understand NOM removal during different processes.

This paper is scientifically of a good quality level, however, some statements should be better founded. Especially the introduction should show more references, even if the

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statements are more or less accepted.

Specific comments Page 233-234: References would improve the scientific level even more. Page 237: Reference at line 13, after only recently became available. Page 238, line 11: what was ambient temperature? Page 241, line 5-10: it is assumed that separation takes place only by differences in molecular size, it is however known that interaction with the stationary phase will also influence the retention of the fractions. Page 242, line 12: are likely to be highly biodegradable, needs a reference. Page 242, line 13-18: it is known that ozone attacks specifically unsaturated bonds, which are frequently present in humic acids and hardly in PS. This will lead to the formation of easily degradable small organic acids like acetic or oxalic acid. The expectation should be different then. Page 242, line 19-20: the increase of the PS fraction can possibly be explained by excretion products of bacteria. Recently is found that the PS fraction also can contain proteins and amino sugars, e.g. caused by the presence of bacteria (Stefan Huber of DOC labor, Karlsruhe Germany). Page 245: Further work: just a suggestion, to use SUVA for characterization. SUVA is frequently used for process optimization and is cheap and easy to perform. This will give a good idea of the aromaticity of the humic substances as well.

Technical corrections Page 234, line 18: maximum of 10 mg/L. Page 242, line 14: SH should be HS Page 243, line 3: hydrophobic should be hydrophilic.

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