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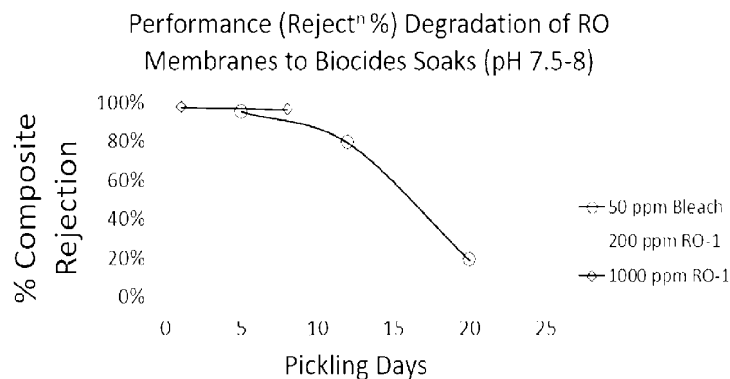


Fig. 1

(57) **Abstract:** This invention provides processes for microbial control in aqueous membrane separation systems, in which the microbial control is provided by bromine-containing biocides. The process for controlling biofouling in an aqueous membrane separation system comprising water and one or more protected membranes. The process comprises: I) contacting, upstream of the protected membrane(s), feed water and a biocidal amount of a bromine-containing biocide to form treated water; II) measuring a bromine residual in the treated water at a monitoring location which is downstream of the contacting in I) and upstream of the protected membrane(s); and III) contacting the treated water and a reducing amount of one or more reducing agents near or downstream of the monitoring location and upstream of the protected membrane(s); wherein the reducing agent is capable of reducing biocidal bromine to bromide ions.



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