



University of Kassel • SiWaWi • D-34109 Kassel • Germany

PAULA Water GmbH
Düsseldorfer Str. 25

41749 Viersen
Germany

address Kurt-Wolters-Str. 3
D-34125 Kassel

room no 3110

phone +49 561/804-2795
-2869

fax +49 561/804-3642

mail frechen@uni-kassel.de

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Certificate for the water treatment system PAULA

Hereby we certify that during tests undertaken by the Department of Sanitary and Environmental Engineering (DESEE), University of Kassel, from 7th November 2012 until 5th February 2013 with a pilot plant identical to the plant design and layout of the water treatment plant system PAULA, after the chlorine dosing unit all measurements concerning e.coli, total coliforms and intestinal enterococci were 0 cfu/mL.

In addition it was proved that with the installed chlorine dosing unit a chlorine content in the treated water of in average 0.3 mg/L to 0.5 mg/L can be maintained.

Investigations undertaken by the Federal Environmental Agency (UBA, Berlin) with the membranes that are used in the PAULA system but without final chlorination unit have revealed that, taken into account a short start up period, viruses are retained to more than 4 log₁₀-steps (LRV = 4; LRV = log removal rate) as an average and at least 2 log₁₀-steps as a minimum. Maximum removal rates were up to LRV = 7 concerning viruses, i.e. 99.99999%.

Sincerely yours,

Prof. Dr.-Ing. F.-B. Frechen