PURION
the best solution

Certificate

Independent assessors have been confirmed:
For all of the test bacteria a considerable reduction could be proven because of the operation of the UV-disinfection plant PURION 1000 (see spreadsheet).

Reduction of the bacteria that have been in focus of the examination:

parameter	colony count at 36°C	Pseudomonas Aeruginosa	Escherichia Coli
concentration within influent flow (average)	8.540/ml	388000/100 ml	1.360.000/100 ml
concentration within outflow (average)	0,4/ml	5,6/100 ml	0,8/100 ml
factor of reduction*	4,33	4,84	6,23
reduction	99,9953 %	99,985 %	99,9999 %

*factor of reduction = $\log_{10}$ concentration of the bacteria within the influent flow - $\log_{10}$ concentration of the bacteria within the outflow

For the test bacteria Enterobacter Cloacae the operation of the UV-disinfection plant PURION 1000 lead to a reduction by approx. 4 $\log_{10}$-steps. Therefore the bacteria have been reduced by 99,99%. Within the outflow the threshold of 100 KBE/ml regarding colony count at 36°C according to the drinking water ordinance has been met in all of the samples. The maximum value within outflow was 1 KBE/ml (within two of the samples). For three samples the value was 0/ml. Therefore concentration of bacteria has been below the detection limit.

For the test bacteria Pseudomonas Aeruginosa the operation of the UV-disinfection plant PURION 1000 lead to a reduction by approx. 5 $\log_{10}$-steps. Therefore for Pseudomonas Aeruginosa an average reduction by 99,9985% could be reached. Within the outflow of the UV-disinfection plant only very small counts of Pseudomonas Aeruginosa could be detected – 5,6 KBE/100 ml in average.

For the test bacteria E.Coli the operation of the UV-disinfection plant PURION 1000 lead to a reduction by approx. 6 $\log_{10}$-steps. Therefore for E.Coli an average reduction by 99,9999% could be reached. Within the outflow of the UV-disinfection plant within three samples only very small counts of E.Coli could be detected (1 or rather 2 KBE/100). Two of the samples have been free of E.Coli.

In general it can be attested that the UV-disinfection plant PURION 1000 was very efficient and suitable within the conducted tests. Within the test setup the bacteria have been reduced by 4 to 6 $\log_{10}$-steps.

For the lower bound of reduction by 4 $\log_{10}$-steps the colony counts for the test bacteria could be reduced below 100 KBE/ml or rather for E. coli 10000/100 ml by using the UV-disinfection plant PURION 1000. Therefore microbiological thresholds regarding drinking water ordinance have been met.