MARINFLOC
a clean sea

Statement concerning operation and sampling of Marinfloc Sewage treatment plants

The Marinfloc Sewage treatment plants are type approved by DNVGL as per MEPC 227(64). The system is designed to treat inlet levels of 500 mg/l TSS (Total Suspended Solids) & 500 mg/l BOD_5 at an average load. Food waste and/or food waste reject water should never be mixed with black/grey water as the requirements of both ANNEX IV & V would then apply. Food waste and/or food waste reject water will overload the sewage treatment plant with organic load. The bioreactor is a vital part of the process and it must have been kept active for > 28 days in order to be fully active, from a process point of view the bioreactor should never be turned off.

Anti-bacterial agents should be avoided in the black/grey water as these can damage the biology in the treatment system. Sampling should be conducted as per Marinfloc instructions.

The below levels of the effluent can be guaranteed as a ten-day, average load, 40-samples, geometric mean value in accordance with MEPC 227(64) §4.2:

TSS	35mg/l
BOD_5	25mg/l
COD	125mg/l
TT Coliforms	100pc/100ml
pH	6.0-8.5
Nitrogen	20mg/l (or 70% red.)
Phosphorus	1mg/l (or 80% red.)

Results from grab samples may vary considerably both on the influent and effluent and may well exceed a factor of two as also stated in MEPC 2(VI).

Influent sampling is required to determine the reduction rate as per the Nitrogen and Phosphorous requirements. As the Marinfloc system is utilizing the inlet tank as a part of the bioreactor it is impossible to take an inlet grab sample that is not affected by the treatment process. Therefore, inlet sample values could show figures that are reduced to 50% of the original inlet value.

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