Gardening

Water purification, designed for horticulture

Pure drinking water from polluted freshwater sources, in 1 system and in 1 step, free from chemicals

The Josab Aqualite™ System exhibits a series of features that are beneficial for water treatment. Water from a variety of sources, such as ground water or rain water, is effectively cleaned. In horticulture, the systems are used primarily for either incoming water from the source, and/or for re-circulating water. The Gardening series have been designed with references to experience from field installations in Denmark. Of all good qualities with the Josab Aqualite™ System, two major effects for the gardener stand out:

1 Transmission values are dramatically increased

Josab Aqualite™ System will filter off particles down to as low as 1-2 µm. In comparison, a typical sand filters remove particulates down to 50 µm, and carbon filters down to 25 µm. This is important for the efficiency of the down-stream UV. Hence, with your installed UV system, the flow rate can be increased accordingly. Alternatively, a smaller and less expensive UV source can be installed.

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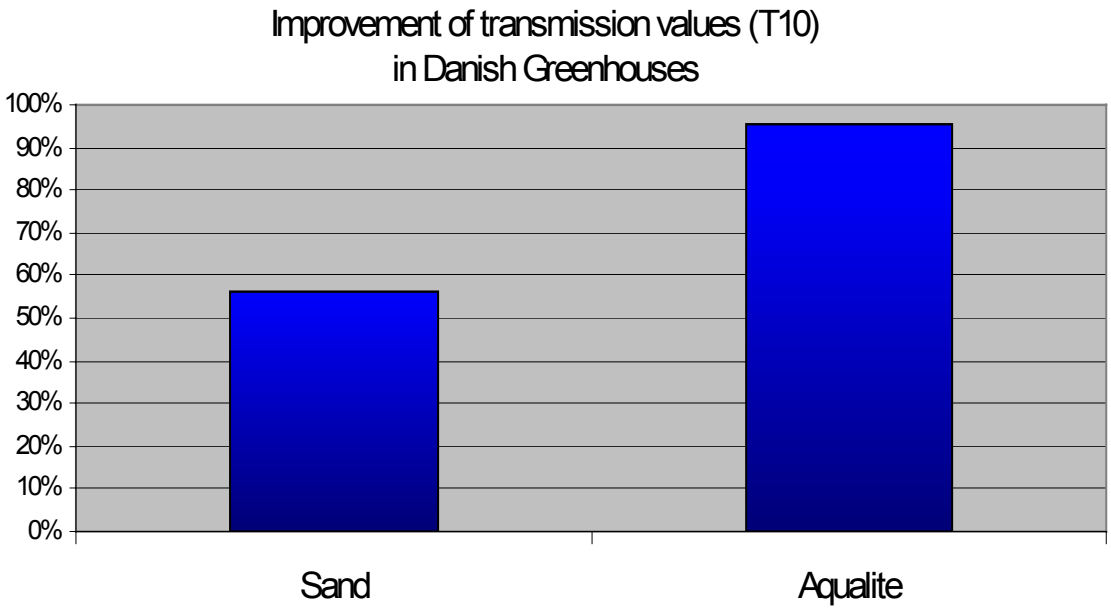
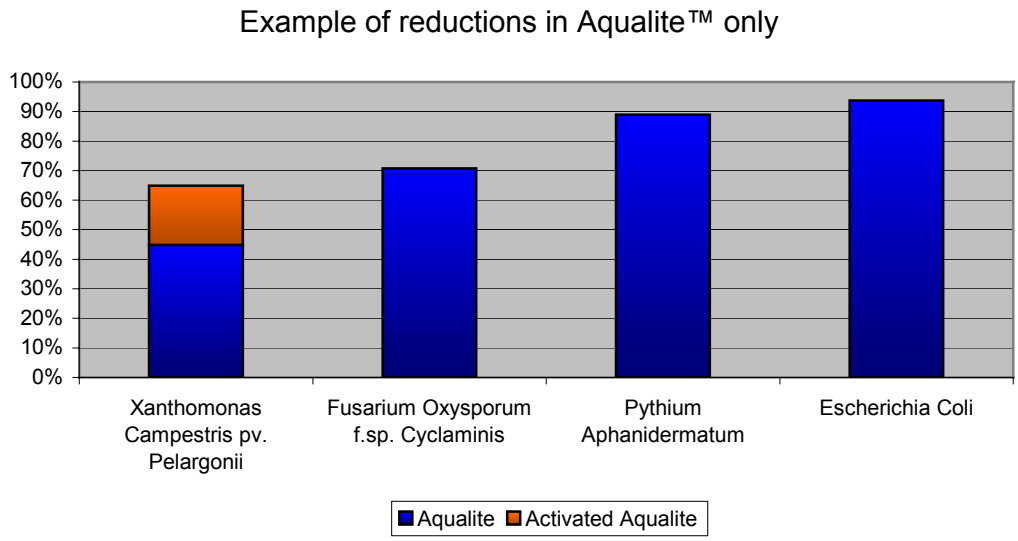
Gardening



2 The sterilization process starts already in the filter

The Josab Aqualite™ System exhibits a documented reduction of bacteria, viruses and fungi in the range from 66% to 98%. Bacteria are retained by the bead, partly because of their size. Clearly, no such effect can be seen in sand or carbon filters. On the contrary, those are often media promoting bacterial growth.



The combination of higher transmission values and less microorganisms in the effluent water dramatically increases the efficiency of the UV.

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The Josab Aqualite™ System operates with flow of up to 100 m^3/h, installed as 1 or more filter tanks connected in parallel. The pictures below are taken at a farm with a Josab Aqualite™ System installed, with UV-filter and flow automation, for cleaning of collected rainwater.

Right: A lettuce farm in Denmark
Green House area: 5 ha.

Left: A complete plant, consisting of a Josab Aqualite™ System including UV, with flow automation, installed in a 10 feet container.
Treatment capacity: 15 m^3/h

Right: Water taken after the treatment in the owner's right hand, and the back-flush water in his left.

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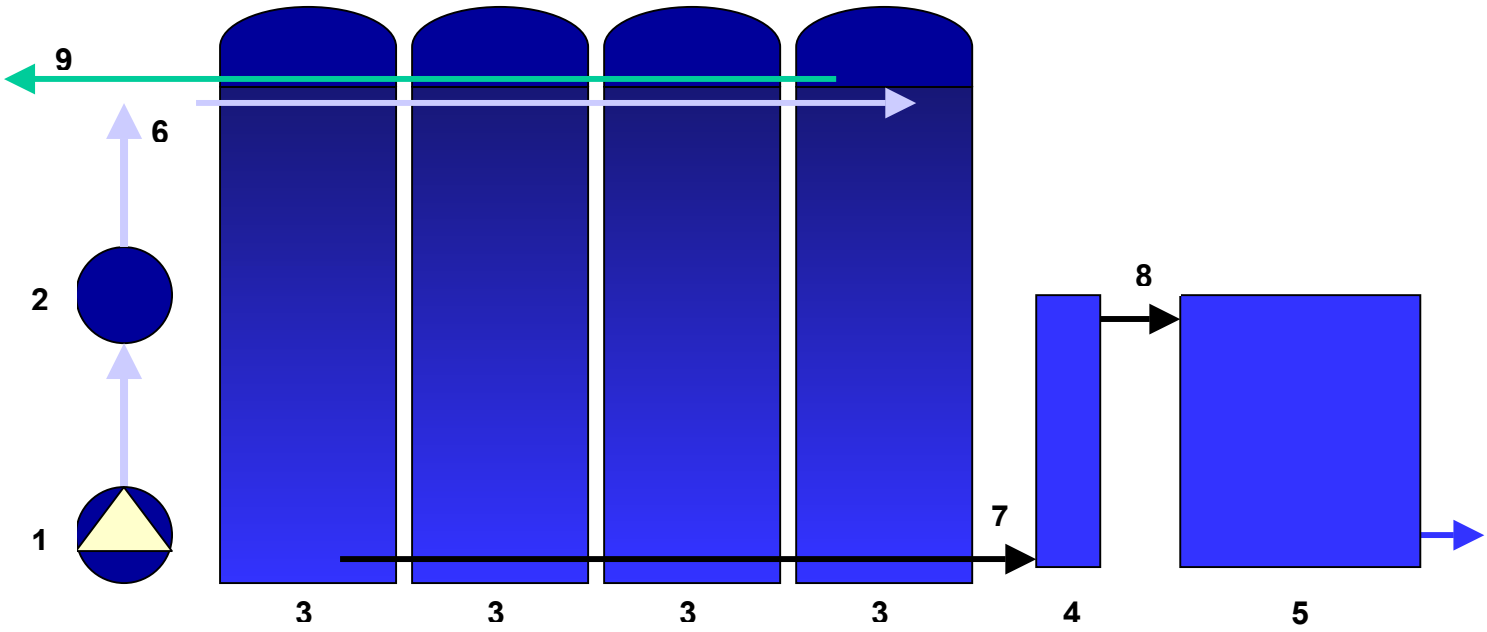
JOSAB Aqualite™ System

No Chemical additives in the process



1 = Process Pump

2 = Sludge Filter

3 = Filter with Aqualite™

4 = UV-Filter

5 = Reservoir with treated water

6 = Inlet filter

7 = Outlet filter

8 = UV-treated water

9 = Backwashing water

This configuration permits one filter to be backwashed with the treated water from the other filters

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Gardening

What is **Aqualite™**

A natural mineral with unique properties for purifying water

Physical properties

-Uniform structure;
-Large pore volume;
-Very fine pores: 0.1 – 1.0 nm; and
-Large active surface area: 200 – 500 m^2/g.

Function as an excellent filter material

-Remove water-borne particles greater than 1 – 2 microns;
-Adsorbs chemicals and is an ion exchanger;
-Removes heavy metals, and ammonium and hydrogen compounds,
-Reduces COD, BOD and ammonium compounds; and
-Reduces bacteria, such as E-coli, coliform, and heterotrophs, as well as parasites, including cryptosporidium and giardia lamblia

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