WHITEPAPER

Effective removal and prevention of biofilm build-up in cannabis water lines with Intra Hydro pure

Released: April 17 2020

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With the ongoing legalisation of marijuana in many countries worldwide, the professional cannabis industry is also rapidly growing. The industrial cultivation of cannabis uses dripping/ irrigation lines to provide the plants with sufficient water. However, invisible from the outside, a biofilm may build up on the inner lining of these water systems. Such biofilm may significantly reduce the water flow or even physically clog entire drippers, and will provide a hiding place for plant pathogens like botrytis, fusarium, pythium and mildew.

The build-up of a biofilm typically starts with the attachment of a single microorganism cell in suspension onto a surface, for example the inner surface of a water line. This microorganism starts to multiply and secretes extracellular matrix components to build a protective environment. So the biofilm inside a line is not just a slimy layer, but actually a well-structured and highly organized microbial community. This process is accelerated by the relatively high temperatures and organic soiling typically present in cannabis cultivation, and further stimulated by relatively low flow volumes at start of culture.

Biofilm; slimy organic contamination inside irrigation pipe

Years of worldwide experience in the horticulture industry have demonstrated that traditional disinfectants like chlorine may disinfect the water itself, but do not remove the biofilm. Intra Hydro pure is an ultra-stabilized hydrogen peroxide solution that both disinfects the water, but also physically removes the biofilm from the inner lining. Due to its unparalleled stability, Intra Hydro pure remains active from the beginning of the water line until the last dripper.

The addition of 40 ppm (40 ml Intra per 1,000 liter of water) guarantees that the water will remain free of microorganisms and no biofilm will build up in the water system.