

Huwa-San TR-50

Disinfection of Commercial Water Systems



What: Huwa-San TR-50

Where: Commercial Water Systems. By ‘commercial’, we mean water tanks between 200L and 10000L in volume. So, places such as large Nursing and Care Homes, water treatment companies and councils.

When: The best time to disinfect any water system is when you know that it won’t be used for around 12 hours - for example, after all the morning washing routines are done and out of the way. This allows you to apply Huwa-San TR-50 in a relatively undisturbed way.

Why: Huwa-San TR-50 disinfects water systems and kills legionella bacteria. There are no strict rules as to how often you should disinfect your water system, but HSG 274 Part 2 recommend that you inspect the system annually, and disinfect if required. This ensures that your property remains compliant. (The Control of Legionella Bacteria in hot and cold water systems)

How:

Step 1) You first of all need to know how much water you are disinfecting. You do this by finding the volume of the cold water tank, the calorifier and the pipework combined. **Tank:** the volume is normally printed on the label; if it’s not then you have to multiply the length x height x width to get the volume. **Calorifier and pipework:** if you have a calorifier, multiply the tank volume by 1.3... if you do not have a calorifier, multiply the tank volume by 1.1.

Step 2)

Water system volume	Amount of Huwa-San TR-50 needed	Bottles of Huwa-San TR-50 needed
200 litres	40 ml	1
500 litres	100 ml	1
1000 litres	200 ml	1
5000 litres	1000 ml	1
10000 litres	2000 ml	1

Step 3) Isolate the tank from the mains water supply, drain and thoroughly, manually clean the inside. Residue can be removed with a wet & dry vacuum cleaner. **Note:** if you cannot isolate the tank from the mainswater supply, then you can omit step 3.

Step 4) Fill the cold water storage tank with fresh water and dose the tank with the recommended amount of Huwa-San TR-50.

Step 5) Open the hot and cold taps **furthest** from the cold water tank and let the water run for one minute.

Step 6) Check the water from these taps with an Huwa-San TR-50 test strip. You’re looking for hydrogen peroxide levels of more than 100ppm, so use the colour guide on the test strips to help you.

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Step 7) If the test strip shows hydrogen peroxide levels of more than 100ppm, great – you can now draw the Huwa-San TR-50 through the entire system by opening up different pairs of taps, checking that each has a hydrogen peroxide level of more than 100ppm. Flush all of the WCs too. If the test strip shows hydrogen peroxide levels of less than 100ppm, you need to add more Huwa-San TR-50 to the water tank and repeat. A lower hydrogen peroxide level indicates a dirtier water system.

When adding more Huwa-San TR-50, the general rule is this; if the test strip shows hydrogen peroxide levelsof:

System Volume	Peroxide 25ppm (further peroxide addition in ml)	Peroxide 50ppm (further peroxide addition in ml)	Peroxide 75ppm (further peroxide addition in ml)
200	30	20	10
500	75	50	25
1000	150	100	50
5000	750	500	250
10,000	1500	1000	500

Step 8) After checking all outlets are showing 100ppm or more, the furthest outlet should be rechecked. If the reading is the same, you are done. After 24 hours of normal usage, your water system will become completely disinfected. If you need water samples for any reason, do wait until after this initial 24 hours for accurate results.

NOTE: In the first 12 hours after disinfection, you may notice discoloured water or pieces of biofilm coming through taps. This will subside.

And finally: If the system has a history of persistent legionella bacteria, you should increase the Huwa-San TR-50 dose in order to achieve a 1000ppm hydrogen peroxide level. This level of hydrogen peroxide will get rid of resistant biofilm quickly and effectively but is **not** safe to be used by people - once 1000ppm is achieved at alloutlets, leave it for one hour; then run water through the system until the levels are back down to 100ppm atall outlets.

Huwa-San TR-50 Health and Safety

SAFESOL advocates the use of appropriate safety equipment when using any chemical. Please refer to the MSDS sheet prior to use.

In hospitals, never do an Huwa-San TR-50 disinfection if there is a dialysis unit or laboratory linked to the water system or if there is the possibility of Huwa-San TR-50 getting into the water supply to these units.

Before using any chemical, you should always reference your in-house Risk Assessments and Method Statements.