

PHARMACEUTICAL INDUSTRY

Application In Pharmaceutical Industry.

This technical bulletin outlines the various applications and uses of CDD 5000 in Pharmaceutical Industry. F&B and Pharmaceutical are the only two industries which are governed under most stringent regulatory guidelines as they have a direct correlation with human health and human consumption substances.

As like in most of the industries even in pharmaceutical industry water plays a very crucial role as an utility and as an Raw Material. The bacteriological parameters are verified and checked on hourly or daily basis. In addition to the Eco/i & Coli forms the basic groups infections like Pseudomonas, Salmonella, Legionella, Molds, Spores are very commonly encountered.

The cause for the same would be source water contamination. The supply of the source or process water may be from Tap water, River, Borewell, Water supplied by the industry association or from Tankers.

Due to a factor called as an immunity building, the bacteria present at the contact surface of various equipment, pumps etc., or in the water develop a resistance towards the commonly used biocides. And start developing biofilm which acts as a breeding zone for the bacteria to prosper. This makes the entire system contaminated.

Due to this phenomena though a biocide is present in water, still the water after analysis will show positive count. Increasing the dose of the biocide does not yield stable results.

In a normal course a water treatment system consists of the following steps in sequential manner.

- PSF filter
- Activated carbon filter.
- Water softener in case of hard water.
- DM water generation through Anionic, cationic & mixed bed resins.
- Ultra filtration.
- Reverse osmosis.

The water entering the ACF is or softener is dechlorinated with the help of SMBS and the water passing through further units do not have a biocide to avoid bacterial contamination. And used of other chemical on shock dosing will damage the membranes and resins.

CDD 5000 does not damage the resins or membrane of the RO. Membranes of several type excluding cellulose membranes have shown compatibility with CDD 5000 at user concentration levels & for sanitation at OP level.

CDD 5000 has following applications in Pharmaceutical & Biotech industry.

- Process water/Raw water treatment.
- Clean-in-Place (CIP) and Sanitization Operations
- For virus, bacteria, Mold removal.
- For Membrane & resin sanitation.
- For air sanitation.
- Sanitization of Raw & process water tanks.
- Waste water treatment.

