

# Evacetic

## The dedicated agent for the Evacle 80 Medical Waste Treatment Solution



### How does it work?

Once medical waste has been shredded by the Evacle 80 Medical Waste Treatment Solution, it goes through a sterilization process while being rigorously agitated. This process has been intensively studied and after years of research and development we have established the ultimate solution, eliminating resistant bacterial spores and sterilizing to STAATT level IV. The residue liquid is nontoxic and can be safely discharged down the regular drainage system. We call it 'Evacetic' - which is based on the known powerful sporocide Peracetic Acid (PAA).

**Important: Evacetic is only to be used in conjunction with Evacle machinery**



## Evacetic Sterilant

For the purpose of medical waste treatment for sterilization by the Evacle 80 unit, Evacle uses a special solution named Evacetic. The Evacetic is based on the synergistic sterilizing effect of Peracetic Acid (PAA) and Hydrogen Peroxide (HP).

Both chemicals are strong oxidizers and together, are highly potent at disrupting the cellular activity of all pathogenic microorganisms. The main active substance in the Evacetic is PPA.

# Biocidal Effect of PAA in 40°C Temperature of action

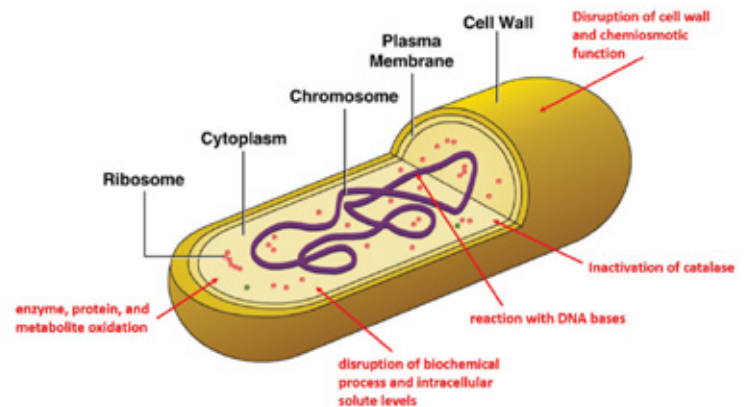
Kill times (in minutes) according to the suspension method of Dosimetric Leaf Gap DLG with  $10^7$  -  $10^8$  CFU / ml in the initial inoculum.

Application concentration (%) as PAA 100%	0.01	0.025
<b>Time it takes for sterilization</b>		
<b>Gram-Positive Bacteria</b>		
Staph. aureus	1	0.5
Strept. faecalis	1	0.5
<b>Gram-Negative Bacteria</b>		
Enterobacter aerogenes	1	0.5
Ps. aeruginosa	1	0.5
Salmonella types	1	1
<b>Yeasts</b>		
Sacch. cerevisiae	1	0.5
Cand. mycoderma	3	1
<b>Molds</b>		
Penicillium cameronense	3	1
Asp. niger	10	5
Mucor spec.	3	1
<b>Sporulators</b>		
Bac. cereus	1	0.5
Bac. subtilis	1	0.5
<b>Bac. mesentericus</b>		
Thermophile sporulators	1	0.5
Clostridium perfringens	1	0.5

Source: major PAA producer

# Sporicidal Effects of Evacetic

PAA is a powerful oxidizer with a highly sporicidal ability (the capability to eliminate spores), it has been found to successfully inactivate a vast array of microorganisms. The mechanism of PAA is shown in Figure below. The synergistic combination with the HP is based on the HP compromising the spore's coat, which is the main spore resistance factor, likely allowing better penetration of PAA.



## The mechanism of PAA

## The strong oxidizing effects of PAA result in:

- The breakdown of the molecular functions of the microorganism
- Disruption of functionality of the microorganism proteins
- Interruption to double bonds within the cell, leading to destruction of proteins



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