**Aldehydes**

Examples: formaldehyde, gluteraldehyde

Aldehydes are highly effective, broad spectrum disinfectants, which typically achieve sterilization by denaturing proteins and disrupting nucleic acids. The most commonly used agents are formaldehyde and gluteraldehyde.

Aldehydes are effective against bacteria, fungi, viruses, mycobacteria and spores. Aldehydes are non-corrosive to metals, rubber, plastic and cement. These chemicals are highly irritating, toxic to humans or animals with contact or inhalation, and are potentially carcinogenic; therefore their use is limited. Personal protective equipment (i.e., nitrile gloves, fluid resistant gowns, eye protection) should be worn if using these chemicals.

***Formaldehyde***

Formaldehyde is used as a surface disinfectant and a fumigant and has been used to decontaminate wooden surfaces, bricks and crevices of electronic and mechanical equipment.

Its use must occur in an air tight building, which must remain closed for at least 24 hours after treatment. The efficacy of formaldehyde is dependent on relative humidity and temperature; optimum being humidity close to 70% and a temperature close to 57oF. [Formalin is 37% solution of formaldehyde in water].

***Gluteraldehyde***

Is primarily used as a disinfectant for medical equipment (endoscopes) but can provide sterilization at prolonged contact times. A 2% solution is used for high level disinfection. Its efficacy is highly dependent on pH and temperature, working best at a pH of 7 and higher temperatures it is considered more efficacious in the presence of organic matter, soaps and hard water than formaldehyde.An example product is cidex.