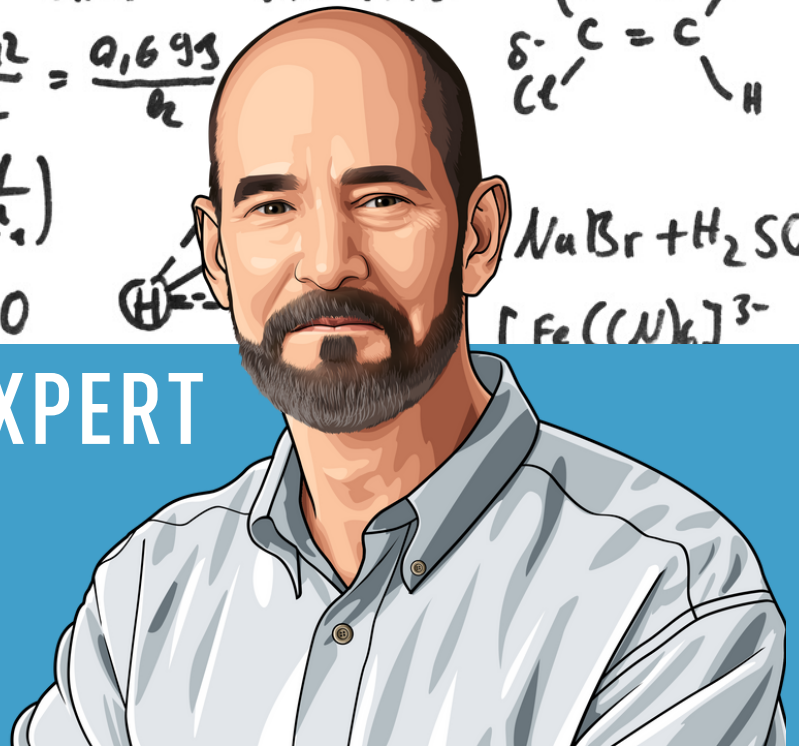


DO YOU KNOW YOUR CHEMICAL STERILANTS?



GAS STERILIZATION EXPERT

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A.E. Ted May | Andersen Sterilizers
President & CEO | Andersen Products Division

Beyond Clean Gas Sterilization Expert:

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Can you answer this simple quiz on the comparative toxicity of ethylene oxide, hydrogen peroxide and peracetic acid? How do they compare in terms of OSHA's **Permissible Exposure Limit (PEL)** and NIOSH's **Immediately Dangerous to Life or Health (IDLH)**?

First some background: Ethylene oxide (EO) was introduced as a method of hospital sterilization in the 1950s. By the late 1960s, EO had become the dominant chemical sterilant in major healthcare facilities. OSHA was established in 1971 and, by the early '80s, it set permissible exposure levels for EO. Hospitals began environmental monitoring for EO and testing employees for exposure. So, it took about thirty years for the industry to recognize the potential dangers of EO.

Fast forward a few years. Peracetic acid (PAA) washer/disinfection systems were introduced in the late 1980s. Hydrogen peroxide (H₂O₂) sterilizers were introduced in the early '90s. From the introduction of these systems, there has been a widespread belief that H₂O₂ and PAA are safer than EO, and do not require exposure monitoring.

Comparative Toxicity Quiz

Which sterilant has the lowest Permissible Exposure Limit (PEL) **AND** Immediately Dangerous to Life or Health number (IDLH) - i.e. is the most potentially hazardous:

Ethylene Oxide Hydrogen Peroxide Peracetic Acid

Did you correctly answer EO and H₂O₂ have the same PEL of 1 ppm? Did you know the proposed PEL for PAA is even lower?

Regarding IDLH, the level for EO (800 ppm) is ten times higher than for H₂O₂ (75 ppm) - remember, a higher number represents lower risk. And for PAA, most people are surprised to learn that NIOSH is considering a proposed IDLH value that is lower still.

H₂O₂ and PAA systems have now been around for over thirty years, and they have become the dominate sterilization and disinfection methods in most healthcare facilities. If history repeats itself, the thirty-year grace period is coming to an end. Organizations governing worker safety have begun enforcing monitoring requirements for both H₂O₂ and PAA (Under the OSHA General Duty Clause, employers have an obligation to protect workers from serious and recognized workplace hazards even where there is no standard).

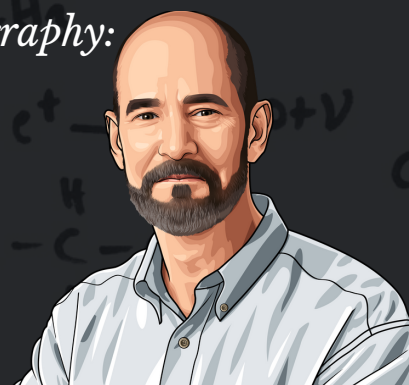
Everyone who operates an EO sterilizer understands the importance of monitoring and testing. Are you testing for these other potentially hazardous chemicals in the workplace?

Answer: Peracetic Acid

Have more gas sterilization questions? Contact Ted at: ted.may@sterility.com

Beyond Clean Gas Sterilization Expert Biography:

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A.E. Ted May is President & CEO of the Andersen Products Division of Andersen Sterilizers, a North Carolina-based medical device manufacturer specializing in low temperature sterilization equipment and hospital consumables. Ted has over twenty years of experience in the field of infection control. He is an expert on ethylene oxide sterilization, with a particular expertise in EO flexible chamber systems. He is a cleared advisor to the US Federal International Trade Advisory Committee on medical devices (ITAC3), where he is Co-chair of the Life Sciences Sub-committee. Ted serves on a number of AAMI committees and has been a subject matter expert for the US delegation to the international ISO Ethylene Oxide Working Group (ISO TC198 WG1). He is a frequent speaker and writer on the subject of sterilization and infection control.

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