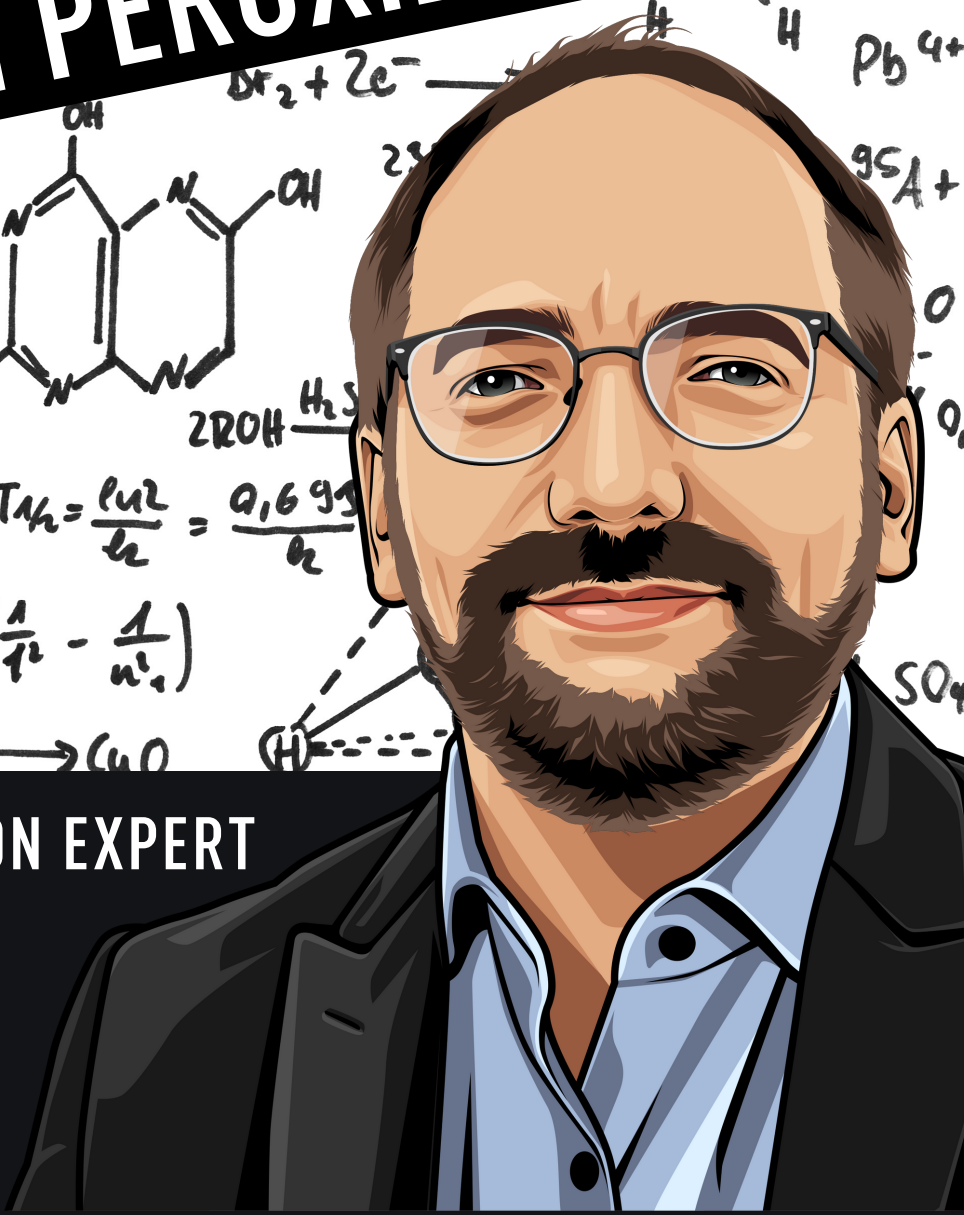
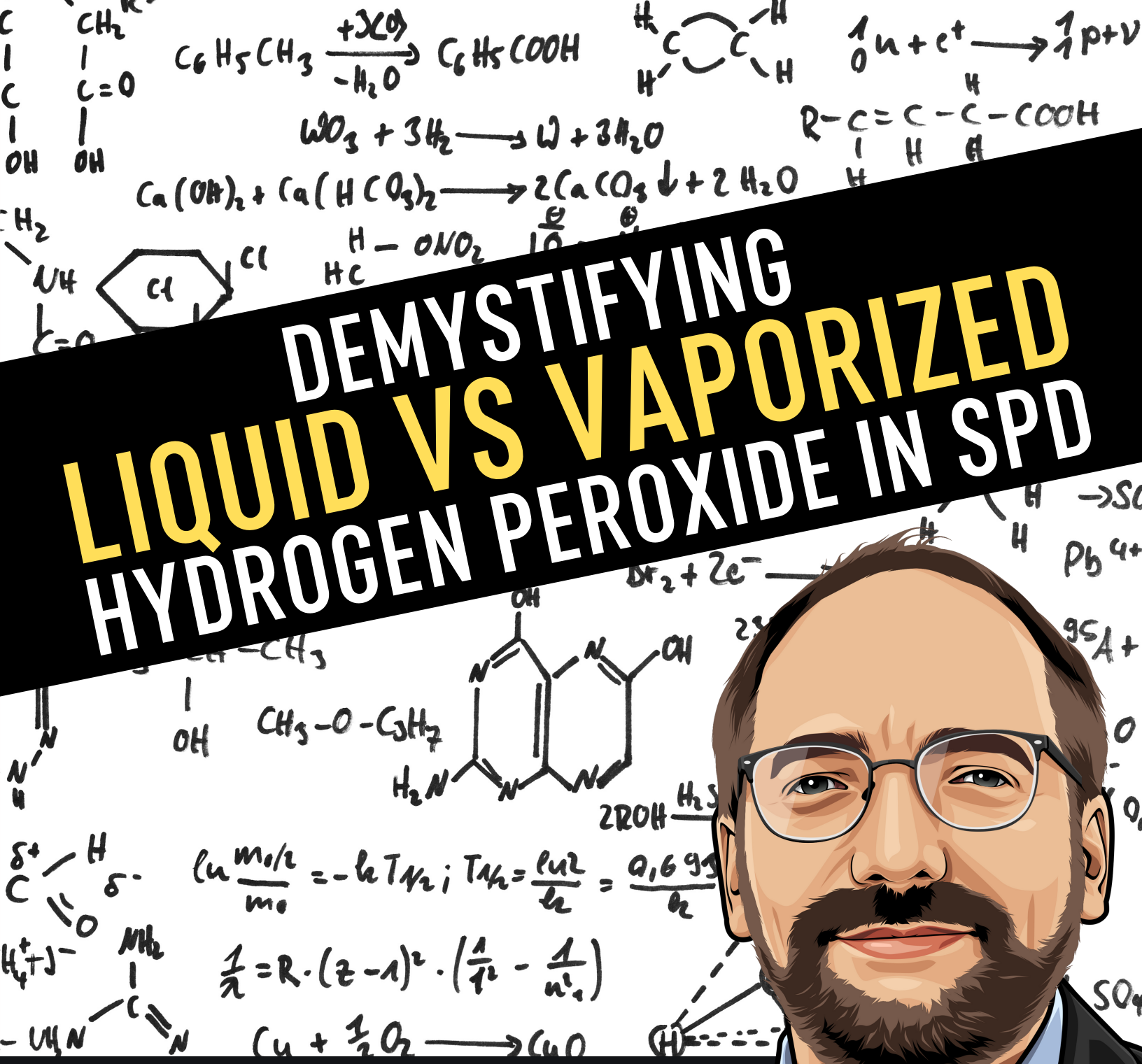


DEMISTIFYING
LIQUID VS VAPORIZED
HYDROGEN PEROXIDE IN SPD



LOW TEMP STERILIZATION EXPERT

BEYOND
CLEAN

Jean-Luc Lemyre | Senior Manager R&D | Stryker

Beyond Clean Low Temp Sterilization Expert™:

DEMYSTIFYING LIQUID VS VAPORIZED HYDROGEN PEROXIDE IN SPD

Jean-Luc Lemyre | Senior Manager R&D | Stryker

Hydrogen peroxide (H_2O_2) is a small and simple molecule with a formula close to water but having somewhat different properties. Across industries, H_2O_2 solutions are used in many ways. For instance, in textiles it is commonly used as a bleaching agent, while in the aerospace industry it is known as a rocket propellant.

H_2O_2 comes as a liquid solution always mixed with water. It is an excellent oxidizer making it very useful in the sterile processing department (SPD). Once H_2O_2 has reacted with bugs and microorganisms, only water and gaseous oxygen is left behind without any harmful by-products. Talk about a clean killer!

This same reactivity causes H_2O_2 solutions to decompose sitting on the shelf. Fortunately, to combat this, commercial solutions contain stabilizers to maintain their concentration during storage. Always follow recommended storage conditions to make sure your product doesn't literally turn into water sitting on the shelf.

H_2O_2 can be found around the SPD for use in various processes in its liquid form for disinfection and sterilization of surfaces and medical devices.

Where we will be starting in this series is identifying key areas of interest with vaporized H_2O_2 sterilization. But how do we get to this gaseous version of the same molecule?

From its liquid state, high concentration H_2O_2 solution is heated under vacuum to vaporize it for use in terminal sterilization of medical devices. The implications of vaporized H_2O_2 are many and I'm excited to be your partner in discovering how a simple molecule can change the way we fight dirty!

The information presented is for educational purposes only for healthcare professionals. Stryker is not dispensing medical advice. A healthcare professional must always refer to the package insert, product label and/or instructions for use, including the instructions for cleaning and sterilization (if applicable), before using any sterilization product. Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: Stryker. All other trademarks are trademarks of their respective owners or holders.

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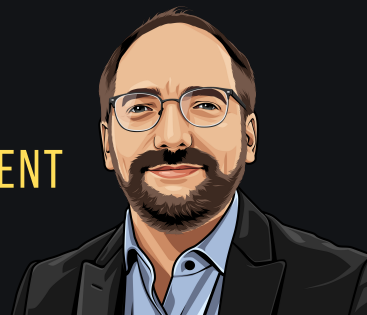
Have more low temp sterilization questions? Contact Jean-Luc at: jeanluc.lemyre@stryker.com

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SENIOR MANAGER RESEARCH & DEVELOPMENT

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Jean-Luc is passionate about science and innovation and has been involved in R&D for two decades, ranging from fundamental academic research to product development. He joined TSO₃ in 2016 where he was introduced to low-temperature sterilization of medical devices using hydrogen peroxide and ozone. Today, Jean-Luc is a Senior Manager of R&D at Stryker following the acquisition of TSO₃. In this role, he leads a team of scientists and engineers dedicated to innovating for the benefit of sterile processing professionals. During his career, Jean-Luc has been involved in several product improvements along with the associated regulatory clearances. He is also an active member of standards development committees with AAMI and ISO.

Before discovering his passion for sterile processing, he started his career doing R&D in the field of personal protective equipment. He has a PhD in chemistry from Université Laval in the beautiful Québec City, where he still lives with his family.

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