

Application

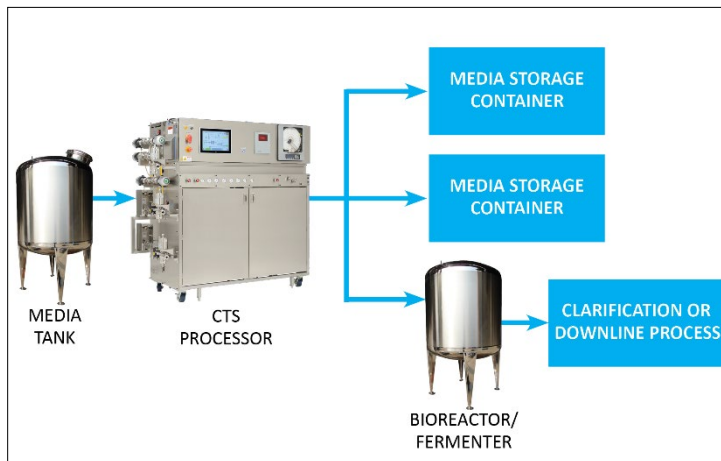
Continuous Thermal Sterilizer (CTS)

Media Sterilization



PROLOGUE

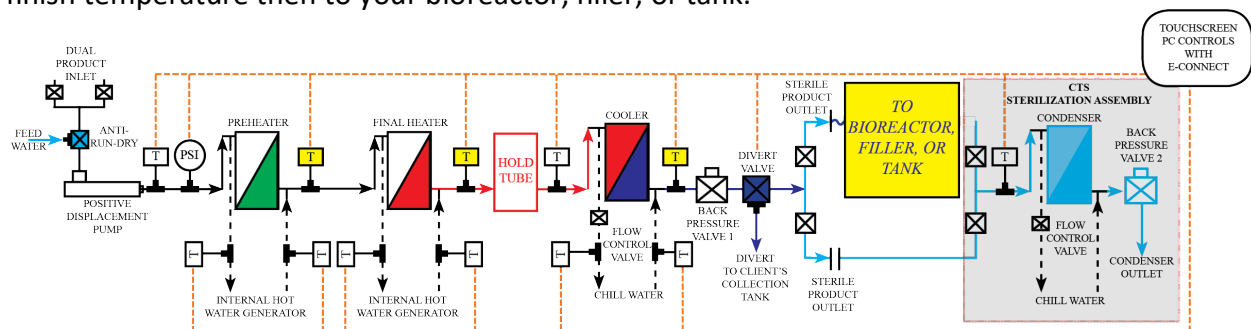
CTS yields the highest quality, most functional media, void of variation due to inconsistent heating. It is more energy and time efficient, requiring less manpower than other sterilization methods. As a continuous flow process, it easily scales up or down to meet changing demands. Adopting CTS allows you to benefit from its improved quality, productivity and reduced costs



Growth media is subject to a wide variety of contamination. These can vary from yeast and molds to mycoplasma, and even viruses. If media is not properly sterilized these result in the loss of your valuable fermentations and production. A CTS eliminates this problem by sterilizing your media continuously as it feeds your media storage containers or bioreactors.

Process Description

In Continuous Thermal Sterilization (CTS), the media is pumped through a pre-sterilized system with heat exchangers to heat it to process temperatures of 138-149°C (280-300°F). It then flows through an insulated hold tube to maintain it at temperature for just a few seconds for sterilization. Finally, it flows through cooling heat exchangers to rapidly cool it to the required finish temperature then to your bioreactor, filler, or tank.



This very short, uniform heat exposure sterilizes the product while minimizing any damage, to the media.

Process Scaling and Optimization

In unprocessed media normal contamination will grow and cause problems in very little time. It is important to match your needs with the throughput of the CTS. MTI BioScience® Continuous Thermal Sterilizers are available in a variety of capacities. Each can function over a range of flow rates and temperatures. This enables us to match the capacity to your current and future needs, and optimize a thermal process to yield your highest quality media.

Additionally, we offer small, lab-scale processors that can be used for small applications or process and product development.

Integration with Existing Equipment and Facilities

Continuous Thermal Sterilizers can be easily integrated into your overall facility and process with options such as:

- Custom integration and programming packages
- Real time data to be transmitted to your SCADA systems for real-time validation of the process
- Options such as cGMP packages, chart recorders, and custom flow rates



Contact MTI BioScience for more information about how we can improve your media quality, productivity and reduce costs!

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