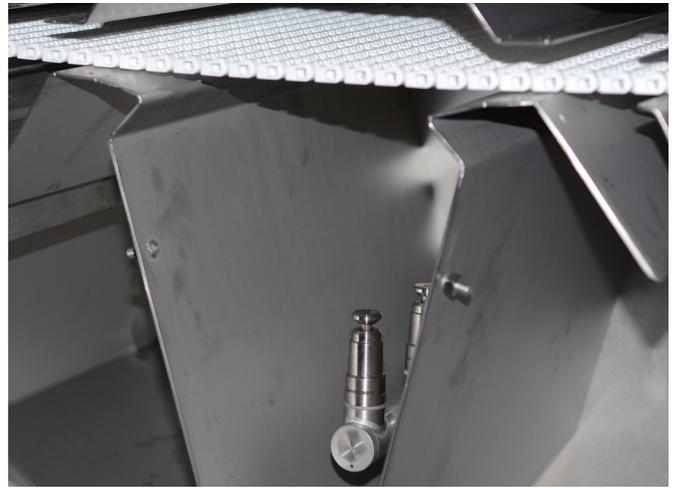
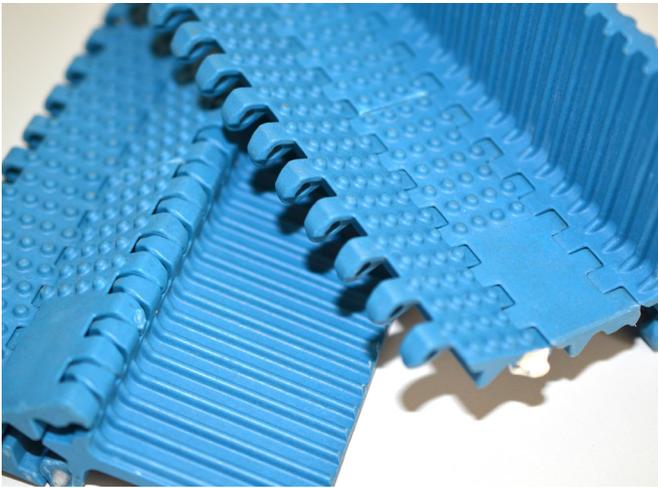


## Decontamination of Conveyor belt

SonoSteam treatment achieves 100% bacteria reductions within two seconds

### Conclusion

*SonoSteam treatment is able to 100% decontaminate conveyor belts in two seconds, regardless of belt structures. The conveyor belts do not undergo any physical, structural or visible changes. The belts quickly find their normal temperature and protein residues do not stick to them, making it possible to run the treatment during production.*



### About the experiment

The conveyor belt, Scanbelt (S. 50-401, PE/Blue), were artificially contaminated with different types of bacteria, in order to test for reduction in Total Viable Count (TVC). SonoSteam MultiMini was used for the treatment of the conveyor belts. The treatment was carried out using 1 whistle for 2 seconds. Each piece of conveyor belt was treated two times, were half of the pieces where either flipped or lifted. Flipping the

conveyor belt is the same as having one whistle on top of the belt and another below, giving a treatment from both sides. Lifting the belt is the same as having two whistles on top after each other. The results are presented in table 1 below. Treatments performed for two sec. achieve total bacterial (TVC) reductions, regardless of lifting or flipping the conveying belt. The belts do not undergo any physical changes.

Table 1:

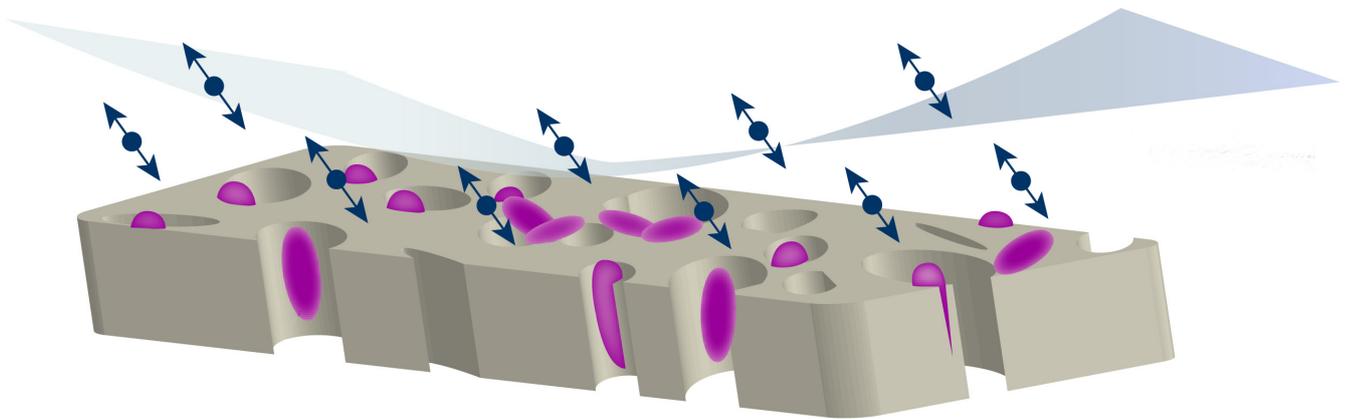
N=3	Average level before treatment Log 10 CFU/45cm <sup>2</sup>	Average level after treatment Log 10 CFU/45cm <sup>2</sup>	Reduction %
TVC	6.30 <sup>1</sup>	0	100

<sup>1</sup>SonoSteam treatment of artificially contaminated conveyor belts; 6.3 log CFU/45cm<sup>2</sup> is equal to 1995262 bacteria per 45 cm<sup>2</sup> conveyor belt.



## SonoSteam disinfection treatment

*The technology combines a quick burst of steam delivered at an ultrasonic frequency. It has proved to be a highly effective chemical-free microbial intervention.*



### What makes the steam-ultrasound combination so effective?

SonoSteam is a chemical free decontamination process designed for food and non-food surfaces. SonoSteam technology applies the combination of steam and ultrasound to achieve rapid and enhanced treatment within seconds.

SonoSteam processes use the “catalyzing” effect of ultrasound that is able of disrupting the laminar sublayer and allow steam to reach the surface in super fast rates. This means that microbes that are present on the surface are exposed to high concentration of intensified heat in the form of dry steam. Microbes inside the microstructures and pores are also affected, making this treatment much more effective than steam processes alone.

Thanks to the “catalyzing” effect of the ultrasound, such processes can occur within just a second. At such fast rates, microbes are killed before heat can penetrate and thermally damage the organic material.

