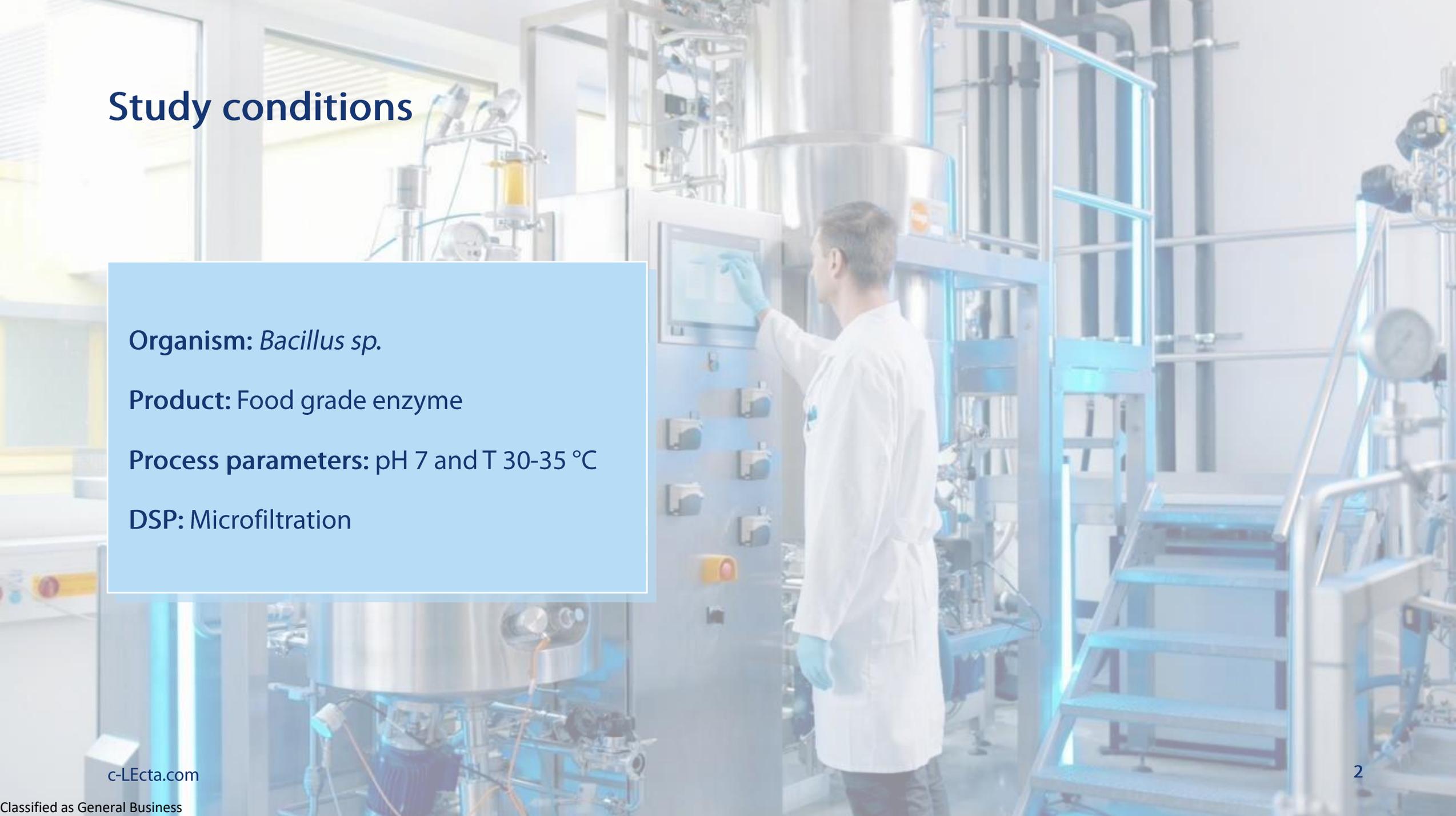


NuCLEANase®

Viscosity reduction in fermentation processes

Case study

Study conditions

A scientist in a white lab coat and blue gloves is operating a large industrial machine in a laboratory setting. The machine has a control panel with a screen and several buttons. The background shows various pieces of laboratory equipment, including pipes, tanks, and a staircase.

Organism: *Bacillus* sp.

Product: Food grade enzyme

Process parameters: pH 7 and T 30-35 °C

DSP: Microfiltration

Case study



Challenge

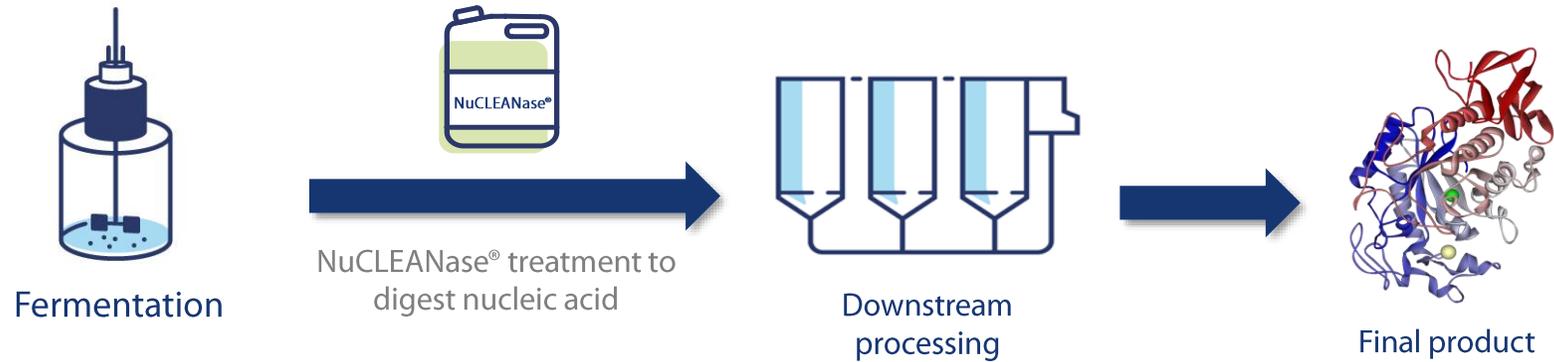
Production process with high fermentation broth viscosity and long filtration time in DSP, presumably due to high load of nucleic acids



Goal

Lower viscosity and consequently improve the enzyme DSP and filtration time

Trial conditions



NuCLEANase® dosage tested: 5 – 100 kU/L

Point of addition: beginning of DSP

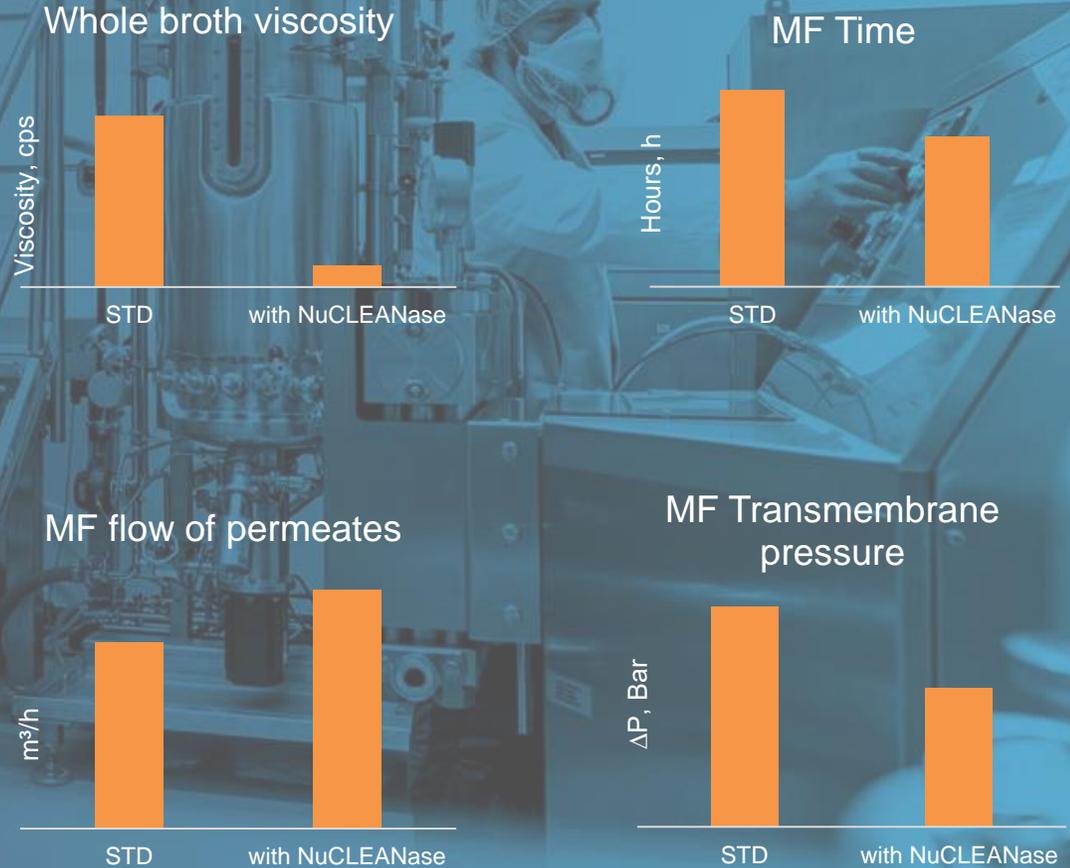
Duration of treatment: 1h

Results

Benefit

Broth viscosity	- 88%
Microfiltration time (MF)	- 25%
MF Flow of permeates	+ 22%
MF Transmembrane pressure	- 37%

* Results correspond to NuCLEANase® dosage of 10 kU/L



Conclusion

Inclusion of even 10 kU/L NuCLEANase® in the fermentation process results with:



About NuCLEANase® food grade

High-performance nuclease for industrial applications



Highly cost-efficient



Highly active - cleaves all forms of DNA and RNA to 2-5 oligonucleotides



Wide range of operating conditions



Free of antibiotics & animal derived raw materials



KOSHER HALAL
Kosher & halal-certified



Full technical Support by experts





Thank you!

c-LEcta GmbH
nucleanase.com

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