

HEAT RESISTANCE OF *LISTERIA INNOCUA* IN LIQUID MEDIUM AS AFFECTED BY THE CULTURE GROWTH PHASE.

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The incidence of *Listeria monocytogenes* in food products associated with a high mortality rate by listeriosis, has been increasing in the last years. Consequently, studies on the survival of this microorganism, under various processing conditions, are of main importance. Research works are usually carried on using stationary phase cultures. Studies comparing survival characteristics of cells in different growth phases are lacking.

Many studies proved that *L. innocua* might be used as a model microorganism for the thermal inactivation of *L. monocytogenes*, since its heat resistance is at least equal to or greater than the one of the pathogenic species.

The objective of this work was to investigate the effect of culture growth phase on the heat resistance of *L. innocua* 10528. Exponential and stationary phase cultures were heated, in liquid medium, at various temperatures: 52.5, 55.0, 57.5 and 60.0°C.

The results showed a gradual loss of resistance of *L. innocua* with the increase of the temperature of the heating medium. Stationary phase cultures were significantly more heat resistant than exponential phase cultures, under the same conditions, which indicate that the thermal resistance of *L. innocua* was dependent on the cellular growth phase.