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Effect of pH, salt and the temperature on growth and bacteriocin production by *Streptococcus* spp. isolated from Algerian cow milk

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**Summary**: The aim of this work was the study of the effect of three technologic factors (pH, temperature and NaCl concentration) on the growth of *Streptococcus* spp. Bacterium isolated from Algerian cow milk. The experimental design used allowed the characterization of the isolated or combined effect of the studied factors. The results showed that sodium chloride concentration had a significant effect on the growth rate of the bacterium (T= 5.08). In addition, pH and salt had a combined effect on growth rate (T= 4.5). Moreover, the pH and the temperature seem to have a combined effect on the growth rate of the *Streptococcus* strain. Whatever the conditions of temperature (32, 37 or 42°C), the growth rate decrease with the decrease of pH and the increase of salt concentration. The comparison between the experimental growth rate and the calculated one show a good correlation (R²=0.91). These results allowed the characterization of optimal growth conditions and bacteriocin production under different culture conditions of *Streptococcus* spp.

**Keys words**: *Streptococcus* spp., pH, Température, Bacteriocin