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Effect of Storage Period of Non-culturable of Pathogenic Bacteria

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ABSTRACT

Our present investigation of storage period of non-culturable pathogenic bacteria under control of different condition of low temperature. We consider mortality reproduction capacity and survival of the fittest bacteria.

Streptococcus of pathogenic bacteria gain high resistant to antibiotic medicine, high rate of mortality and rate of reproductive capacity is very low due to effect of low temperature. Survival of the fittest bacteria is more active during pathogenecity to human being due to gain resistant power to antibiotic medicine.

KEYWORDS: *Non-cultural Bacteria, Low Temperature, Storage period, Refrigeration.*

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INTRODUCTION

Pathogenic bacteria mutate rapidly under influence of environmental factor and effect of low temperature oliver 2000, Xu *et al*. 1982 stored bacteria under influence of low temperature gain high metabolic activity and registrant to antibiotic medicine Sordessal 2005. Survived bacteria show high rate of reproductive capacity pathogenocity during life span Borcina & Arana 2009, Borer Wood 1997, Kell *et al*. 1998

MATERIAL AND METHOD

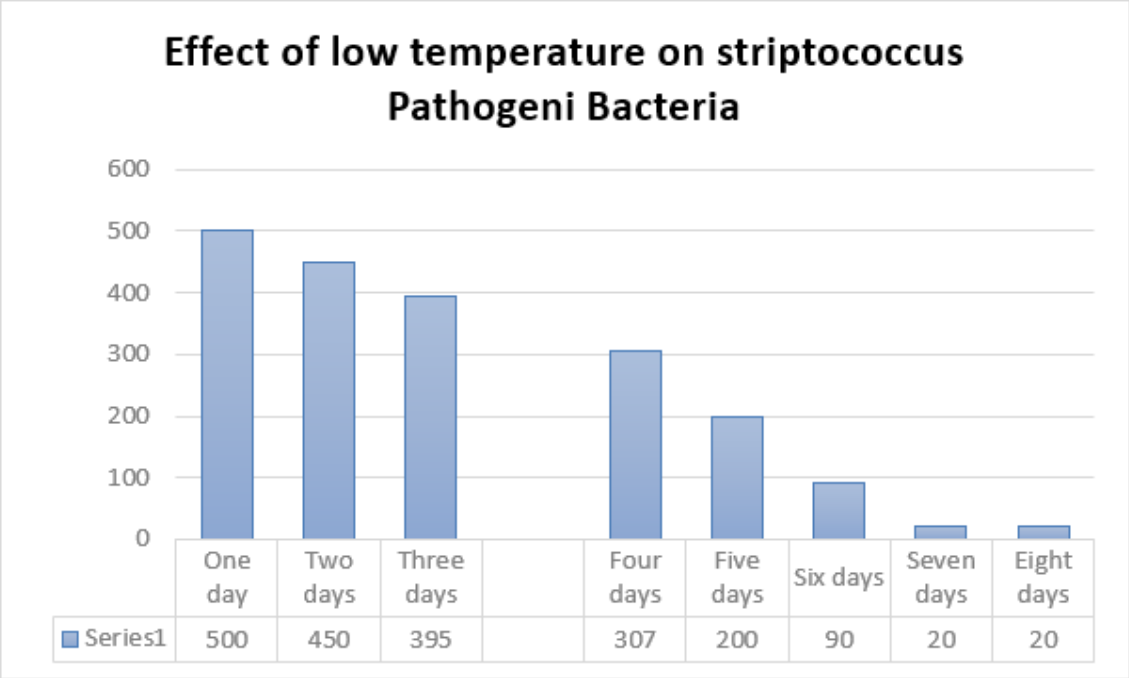
We obtained fresh curd for non-culturable pathogenic bacteria of *Striptococcus* and kept in the refregeration under control of 0°C – 6°C upto eight days and also treated with antibiotic medicine i.e. Almoxo, Amoxicillin, Ciprofloxacin 500 mg. We obtained result with the use of hundred magnification of compound microscope.

RESULT & DISCUSSION

Rate of death is high of striptococcus pathogenic bacteria under influence of low temperature. Survival capacity of stored bacteria show high rate of reproductive capacity, growth, pathogenocity and resistant to antibiotic medicine during etiology due to effect of high metabolic rate under control of gene power.

Pathogenic Bacteria

Time Period / Day	No. Of Bacteria	Rate of death of Bacteria	No. of survived Bacteria
One day	500	500	500
Two days	450	50	450
Three days	395	105	395
Four days	307	193	307
Five days	200	300	200
Six days	90	410	90
Seven days	20	480	20
Eight days	20	480	20



References

[1] Barcina 1 & Arana I (2009) The viable but noncultural phenotype: a crossroads in the life-cycle of non-differentiating bacteria? *Rev Environ Sci Biotechnol* 8: 245-255.

[2] Barer M.R & Harwood C.R (1997) Viable but non-culturable and dormant bacteria: time to resolve an oxymoron and a misnomer? *J Med Microbiol* 46: 629-631.

[3] Oliver, J.D. (2000) The public health significance of viable but nonculturable bacteria. Nonculturable Microorganisms in the Environment (Colwell R.R & Grimes D.J, eds), pp. 277-299. ASM Press Washington, DC.

[4] Sardessai, Y. N (2005) Viable but non-culturable bacteria: their impact on public health. *Curr Sci*. 89: 1650.