



UNIVERSITY PIM BANJA LUKA
UNIVERZITET PIM BANJA LUKA

X INTERNACIONAL CONFERENCE
ON SOCIAL AND TECHNOLOGICAL
DEVELOPMENT

BOOK OF ABSTRACTS

X MEĐUNARODNA KONFERENCIJA
O DRUŠTVENOM I TEHNOLOŠKOM RAZVOJU

ZBORNİK IZVODA RADOVA



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The authors have full responsibility for the originality and content of their own papers.

CHARACTERISTICS OF *PSEUDOMONAS* SPP. FROM RAW MILK

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ABSTRACT

The genus *Pseudomonas* is a heterogeneous and ecologically important group of microorganisms, widely distributed in milk, water and the environment. They are classified as opportunistic pathogenic microorganisms for humans, animals and plants. The aim of this study was to examine the proteolytic, lipolytic activity and biofilm formation in isolates derived from milk. The material was pooled samples of raw milk from which isolates of *Pseudomonas* species (n=60) were isolated. Proteolytic ability was tested on nutrient agar with casein and lipolytic ability on Tributyrin agar. The ability of *Pseudomonas* species isolates to produce biofilm was tested in vitro by the Crystal Violet (CV) method on microtiter plates. In all 60 isolates of *Pseudomonas* spp. proteolytic and lipolytic activity from milk has been demonstrated. Isolates of *Pseudomonas* spp. originating from milk created a biofilm. Of the 60 isolates, 54 (90%) produced a biofilm of varying intensity, while 6 (10%) isolates did not produce a biofilm at all. The largest number, 42 (70%) of isolates of *Pseudomonas* spp. can be classified into medium-adherent isolates, 10 (16,67%) isolates as weakly-adherent and only 2 (3,33%) isolates as strongly-adherent isolates.

Isolates of *Pseudomonas* spp. from milk are good producers of biofilm, proteolytes and lipolytes so that they can cause rotten milk, and their finding is a consequence of contamination and poor hygiene conditions during the process of obtaining milk.

Key words: biofilm, *Pseudomonas* spp., milk.

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