

**EXTRACTION, PURIFICATION AND CHARACTERIZATION OF
PROTEASE OF *Pseudomonas fluorescens* ISH AND IT'S ROLE IN
DETERIORATION OF IRAQI SOFT CHEESE
ISOLATION AND IDENTIFICATION OF *Pseudomonas fluorescens* AND
DETERMINATION OF OPTIMUM CONDITIONS OF PROTEASE
PRODUCTION**

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ABSTRACT

The presence of psychrotrophic *Pseudomonas fluorescens* was investigated in samples of Iraqi soft cheese that produced in the dairy plant of the department of food science, college of Agriculture, University of Baghdad, Iraq.

Depending on the cultural, morphological and biochemical tests and proteolysis, 24 isolates were diagnosed as proteolytic bacteria. The diagnosis was confirmed by Vitek 2 compact system.

The most efficient 5 isolates were used to quantitative investigate protease production capability. The local isolate *P. fluorescens* ISH was the best in enzyme production (117.8 units/mg protein), and thus it was used in the current study to produce the enzyme by submerged cultures.

The optimum conditions for protease production were the use of minimal salts medium with 1% skim milk and pH 8 at a 15^oC for 96 hours and the inoculum size was 1×10^7 using shaking incubator at 125rpm of speed.

Keywords: *Pseudomonas fluorescens*, Psychrotrophic bacteria, proteases, Iraqi soft cheese.