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# Growth Kinetic Study of Bacterial Pathogens of Pomegranate Crop

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**Abstract:** *The activities of microorganisms are greatly affected by the chemical and physical conditions of their environments. Different organisms react to their environment in different ways. An environment that is harmful to one microorganism may be beneficial to another. Sometimes an organism can tolerate an adverse condition in which it is unable to grow. In the present study, optimization of growth conditions of Xanthomonas axonopodis VMB13, Xanthomonas campestris VMB15 and Xanthomonas vesicatoria VMB17 bacterial pathogens of Pomegranate crop were studied. It is observed that the maximum colony number of the pathogens was observed at $30^0$C which was followed by 25 $^0$C, $35^0$C. The minimum colony number of the pathogen was observed at $40^0$C, $20^0$C which was followed by $15^0$C. No growth of the pathogens was observed at $10^0$C and $50^0$C on sterile nutrient glucose agar. The large number of development of colonies was obtained at pH 7.0. Further increase in pH was found to decrease the number of colonies on the agar medium. The maximum number of colonies of the pathogen was observed on agar medium with 0.5% sodium chloride (NaCl) concentration followed by 0.25% and 1.0% salt concentration. Lowest colonies were observed on NG medium with 1.5%, 0.05% sodium chloride concentration respectively.*

**Keywords:** Kinetic study, Pomegranate Fruit, Temperature, pH, NaCl, etc.

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