



**ORIGINAL RESEARCH PAPER**

**Medical Science**

**Protein isolation from *Bacillus thuriengiensis***

**KEY WORDS:** endotoxin, teak leaves, cotton leaves.  $\beta$  and  $\delta$

<b>Dr. Prabhat Kumar Mishra</b>	Centre for Scientific Research and Development, People's University, Bhanpur Bhopal - 462037 (Madhya Pradesh) India. Corresponding author
<b>Dr. Vijay Thawani</b>	Centre for Scientific Research and Development, People's University, Bhanpur Bhopal - 462037 (Madhya Pradesh) India.
<b>Ajaya Chaturvedi</b>	Centre for Scientific Research and Development, People's University, Bhanpur Bhopal - 462037 (Madhya Pradesh) India.

**ABSTRACT**

*Bacillus thuriengiensis* mainly working in Lepidoptera insect ,this bacteria was working in high ph, *Bacillus thuriengiensis* was using for Lepidoptera these insect was harmful to leaves of cotton, teak, These insect were controlled by *Bacillus thuriengiensis*, this bacteria protein was working in high ph, its work in alkaline gut.  
**Introduction:** *Bacillus thuriengiensis* was working as a biopesticide its produce crystal protein Which was harmful to insect Lepidoptera, this proteins was working in high ph, that region for using this bacteria, *Bacillus thuriengiensis* is gram positive bacteria, this Bacteria was found in teak leaves, Cotton leaves and other beneficial plants  $\beta$  and  $\delta$  proteins was present in these bacteria, due to high ph range working, its only working in target organism. The large-scale cultivation of genetically modified crops over several years may increase the selective pressure on the pest species, which may result in the development of resistance. (JL Fox2003) the problems caused by the attack of insect pests reduce production and decrease the quality of the grains or seeds [Rohde2012] not harmful to nontarget organism.

**INTRODUCTION**

**Materials and Methods:** Isolation of *Bacillus thuriengies* from teak leaves in teak leaves it was found in powdery form, In soil it were present, prepare fresh nutrient agar media for growth of bt bacteria these spore was pour in nutrient agar plate, and put in 37 C incubator for one days, after two days for confirmation of bt we did gram staining. after two days pure culture of bt inoculate in nutrient broth for 3 days after three days, completed centrifugation in 10000 rpm. After centrifuge taken upper layer for protein utilization. We are taken *bacillus thuriengiesns* sample .Their resistance may contribute to the reduction of the insect population below the economic injury level, do not cause imbalances in agroecosystems, and have a cumulative and persistent effect. They do not promote increases in production costs and are compatible with other control tactics (Al 2011) There are increasingly records of Bt isolates showing toxic activity to some insect pests. But in the market, there are few toxins of this microorganism used in formulated products and genetically modified crops and May quickly cause the emergence of resistant populations. This fact occurred in different populations of Lepidoptera exposed to Cry toxins(Hackal2007) Several isolates have been tested and characterized against insect pests and disease vectors to be used as basis for production of biopesticides or as donors of genes encoding insecticidal proetiens A baro(2011)

**Result discussion:** *Bacillus thuriengiesns* was a harmful to insect Lepidoptera and it was only attack insect mid gut portion due to high ph and not harmful to non targeted organism

**Conclusion:** The application of *Bacillus thuriengiensis* was totally safe this species was only attack targeted organisms due to high ph, its not be harmful of domestic animals and non targeted, on the other *Bacillus thuriengiensis* applied to foliage. Some times it can move by rain and inactivated by sun light, In this we repeated this application for long term protection against some Lepidoptera. in this case long application of bt was resistance to Lepidoptera species.

Observation of *Bacillus thuriengiensis*

Number	Days of visible observation	Observation in Morphological	Observation in Microscope	Gram Staining observation	Interpretation of result
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1	24hrs	White creamy puffing spore	Poor	Slightly	Spore visibility was not good
2	36 hrs	Dense white Puffing spore	Poor	Not clear	Good
3	48hrs	Clubing of spore	Crystal	+	Spore visible in this hrs
4	60hrs	Spore are white and slightly yellow	Crystal	+	Good visibility
5	72 hrs	Brownish spore	Crystal	+	In this condition excellent

Observation table of *Bacillus thuriengiensis*

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