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# Nano Capsules of Nske (Neem Seed Kernel Extract) On Solanum Melongena ---A Promising Organic Pesticide

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***Abstract***

Nano capsules of neem seed kernel extract (NSKE) have been developed as an organic pesticide for Solanum melongena, commonly known as eggplant. The study aimed to evaluate the efficacy of the nano capsules in controlling the pests and diseases of eggplant. The results showed that the nano capsules of NSKE significantly reduced the infestation of pests and diseases, resulting in an increase in the yield and quality of eggplant. The use of nano capsules of NSKE as an organic pesticide is a promising alternative to synthetic pesticides, as it is environmentally friendly and has no harmful effects on human health.

## Introduction

Solanum melongena, commonly known as eggplant, is an important vegetable crop that is widely grown in tropical and subtropical regions. The crop is susceptible to various pests and diseases, including aphids, mites, and fungal infections. The use of synthetic pesticides has been the traditional method of controlling pests and diseases, but it has led to environmental pollution and health hazards. Therefore, there is a need for environmentally friendly and sustainable alternatives to synthetic pesticides.

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## 1. Nano Capsules of NSKE

Nano capsules of neem seed kernel extract (NSKE) have been developed as an organic pesticide for Solanum melongena. The nano capsules are made by encapsulating NSKE in a biodegradable polymer,

which protects the active ingredients and enhances their efficacy. The nano capsules are stable, easy to handle, and have a prolonged shelf life.

2. **Efficacy of Nano Capsules**

The efficacy of the nano capsules of NSKE was evaluated in controlling the pests and diseases of eggplant. The results showed that the nano capsules significantly reduced the infestation of pests and diseases, resulting in an increase in the yield and quality of eggplant. The nano capsules were found to be effective against aphids, mites, and fungal infections, and had no adverse effects on plant growth or fruit quality.

**3. Advantages of Nano Capsules**

The use of nano capsules of NSKE as an organic pesticide offers several advantages over synthetic pesticides. Firstly, it is environmentally friendly and does not cause pollution or harm to beneficial insects. Secondly, it is cost-effective and easy to produce. Thirdly, it is safe for human health and does not pose any risk of toxic exposure.

**Conclusion**

The use of nano capsules of neem seed kernel extract (NSKE) as an organic pesticide is a promising alternative to synthetic pesticides for controlling pests and diseases in Solanum melongena. The nano capsules are stable, easy to handle, and have a prolonged shelf life. The results of the study showed that the nano capsules of NSKE significantly reduced the infestation of pests and diseases, resulting in an increase in the yield and quality of eggplant. The use of nano capsules of NSKE as an organic pesticide is a sustainable and environmentally friendly approach to crop protection.

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