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Module 6: ORGANIC PESTICIDES PRODUCTION, ANALYSIS AND ITS APPLICATION



Session 1: PYRETHRIN AND NEEM OIL.



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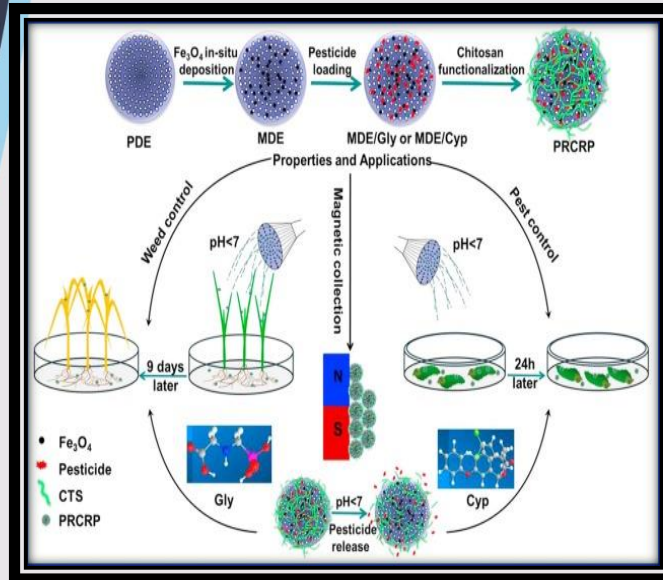
PREPARATION OF PYRETHRIN:

- The process of extraction of pyrethrin is performed by 2 ways :-
 - **METHOD 1:-** A quantity of 50 gms of dry flowers were soaked in 100 ml of petroleum ether for 3 days in shadow .
 - **METHOD 2:-** A quantity of 50 gms of dry flowers were soaked in a mixture consisting of 100 ml of Ethanol , 100 ml of Acetone and 100 ml of petroleum ether for 3 days in shadow .



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- In both methods the mixture of solvents and floers was filtered by using filter paper (watman no.1) then the filtrate was mixed with methanol 80 percent at the ratio 20 : 80
- The mixture were shaken vigorously and left to settle in order to be separated into 2 layers. The layer tend to yellow colour which contain the Pyrethrin was isolated.



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Neem oil:

- Neem oil is a natural by-product of the neem tree. The oil is harvested from the trees, seeds and leaves.





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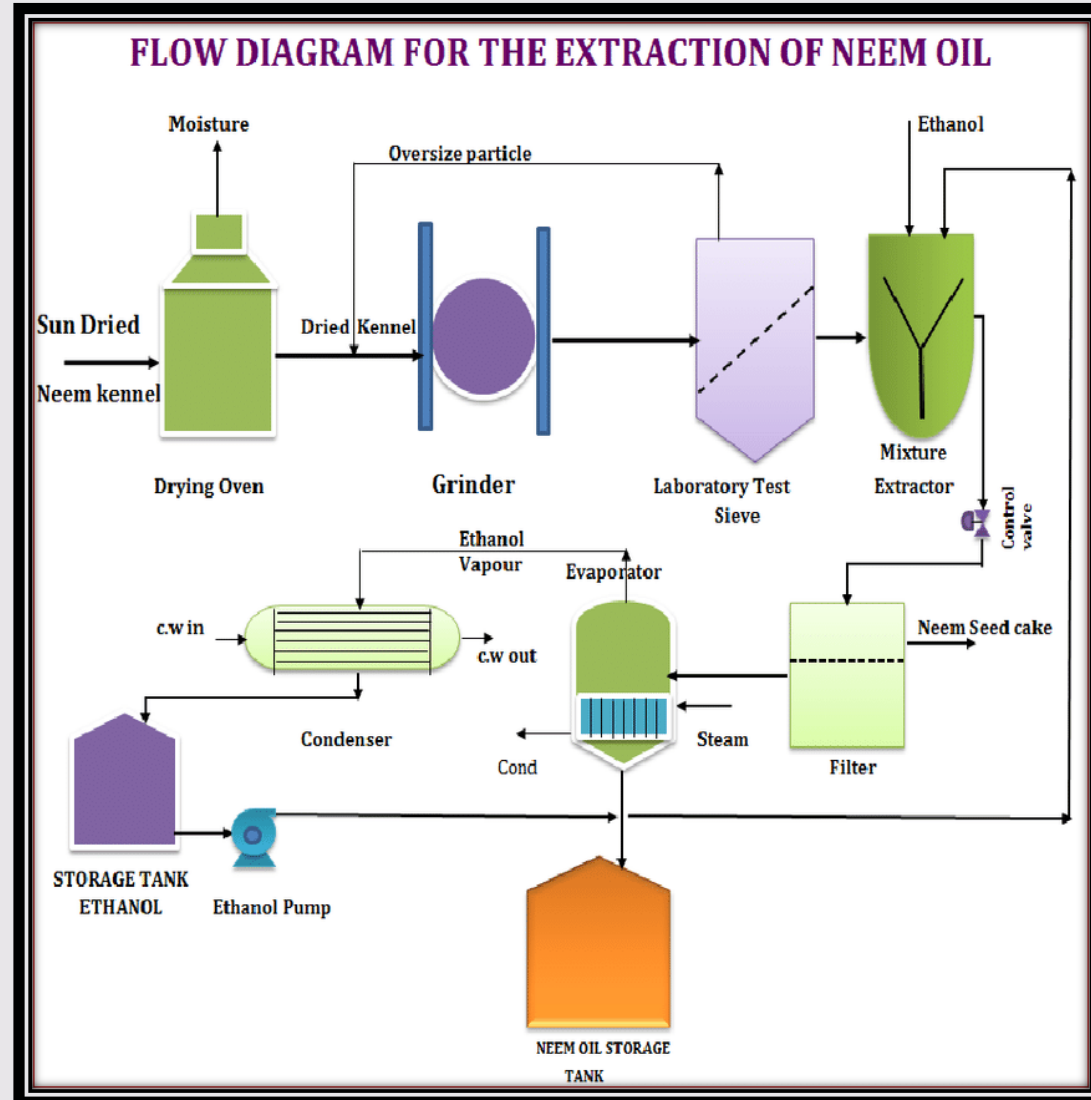
- ❖ **NEEM OIL IS A GREAT FUNGICIDE :**
 - Use neem oil for powdery mildew and other common fungal diseases , including :-
 - i. Black spot
 - ii. Scab
 - iii. Rust
 - iv. Leaf spot
 - v. Tip blight



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Method of preparation of Neem oil:





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- At first the neem kernels are sun dried for excess moisture evaporation followed by grinding to fine powder and sieved.
- Then it is treated with ethanol based mixture extractor and passed through filters.
- Finally steam is passed through the entire mixture to extract neem oil and ethanol is collected on other side to be reused again.



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