

DR-1. A NOVEL WAY TO CREATE MICROCAPSULES AROUND THE INSECTICIDE CHLORPYRIFOS

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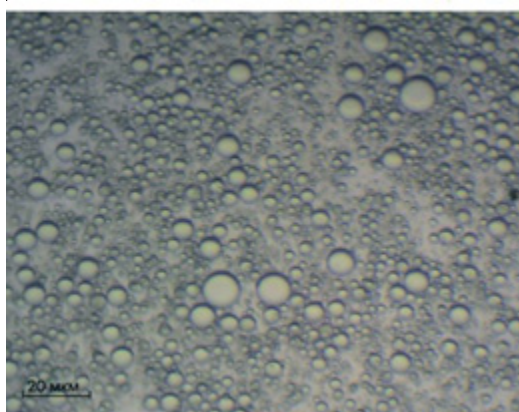
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The active ingredient (AI) chlorpyrifos has established itself as a reliable insecticide, safe for all warm-blooded organisms. We have developed a method for creating lipid membranes around the active substance, protecting it from premature degradation.

Phospholipids dissolve in chloroform/methanol mixture and are deposited as thin film on the walls of a round bottom flask. We used a rotary evaporator under reduced pressure. Multi-layered vesicles are spontaneously formed when an excess volume of AI-containing aqueous buffer is added to the dried lipid film. AI-containing liposomes can be separated from non-centrifuged ones.

As a result, concentrates of an insecticidal microencapsulated suspension containing 5 % active substance were obtained (micrograph is shown in Figure below).



Micrograph of insecticide concentrate on based chlorpyrifos containing lipid microcapsules

Laser diffraction of the obtained microcapsules with insecticide showed that particles with a size of 15 mm (70 %) predominate.

Referenses

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