EXTRACTE VEGETALE UTILIZATE ÎN AMESTECURI SINERGICE CU PESTICIDE DE SINTEZA CHIMICA PENTRU OBTINEREA DE INSECTO-ACARICIDE NOI, ECOLOGICE

EXTRACTS USED IN MIXTURES SYNERGY WITH PESTICIDE CHEMICAL SYNTHESIS, CHEMICAL ACARICIDE INSECTO ORDER TO OBTAIN NEW, ECOLOGICAL

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Considering the more and more severe requirements imposed by the European Community to the products used in plant protection , regarding the danger they represent for the human health and for the environment, as mentioned by the 91/414 EEC Direction, the main objective in plant protection is represented by the search of new alternative methods for pest fighting, specific for a new ecological nonpoluting agriculture with a minimum impact on food. That does not mean to totally give up chemical pesticides, but to decrease as much as posible the undesired effects that result when using them. Utilizing new ecological formulations and obtaining some complex pesticide compositions with synergists from plants represent ways for decreasing the unwanted effects of pesticides on the environment. Plant extracts themselves can act as pesticides but there is a disadvantage, the variation of the concentration of active compounds with many environment factors. This is the reason why one has tried obtaining synergistic compositions of plant extracts with chemically synthesised pesticides. Research undertaken by the authors resulted in obtaining some synergistic compositions based on Umbeliferae seed extracts which have D-limonene and pyretroids (delthametrin, cypermetrin, phenvalerat) as active compounds and which are used in fighting the pets of crop plants and in the veterinary field. To obtain new products, the folowing steps were undertaken: -The optimum method for the extraction of active compounds from plants was selected, namely the ultrasonic extraction from different plant sources. -The co-toxicity coefficient of the synergistic mixtures was established by bilogical screening for the following componenets:cypermetrin and dill seed extract, cypermetrin and d-limonene from citric fruit. -The mixtures technical cypermetrin-dill extract and technical cypermetrin-d-limonene extract were selected from all the studied mixtures. Lab experiments were effected and formulation technologies were elaborated for two insecticide compositions formulated as emulsifying concentrate (cypermetrin + D-limonene and cypermetrin + dill seed extract) and an alcoholic solution composition formulated as a spray, based on cypermetrin and D-limonene. The above mentioned research led to sample preparation, samples which are being tested for checking the biological activity.