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**Horia Hulubei National Institute for R&D
in Physics and Nuclear Engineering**

Process for preparing the acid enzymatic marker 3,6-dichloro-2-methoxy-benzoyl- glycy-alkaline phosphatase (dicamba-antibody-alkaline phosphatase)

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Abstract

The invention relates to a process for preparing the acid enzymatic marker 3,6-dichloro-2-methoxy-benzoyl-glycyl-alkaline phosphatase meant to be used within the ELISA technique of pesticide analysis.

Technology stage

The obtained product can be used in ELISA immunochemical technique for dosing the dicamba pesticide from environmental samples and it was validated in this technique.

Applications

- ELISA kits for detection of the pesticide 3,6-dichloro-2-methoxybenzoic acid (dicamba) from alimentary and environmental samples which leads to increased quality of life through use of uncontaminated food.
- Environmental protection: quantitative analysis of pesticide contaminants from environmental factors (soil, water).
- Chemical industry.

Advantages

The obtained enzymatic marker has the low molecular weight and due its structure (dicamba) has a low affinity towards antibody homolog (anticamba antibody) and short distance between the two protein antibody (epitope) and surface of enzyme that is linked is reduced because of steric hindrance between proteins, antibody and enzyme contained in the structure of the enzymatic marker. Thus was created a bridge between dicamba and enzyme that favor increasing distance between epitope (dicamba) and the enzyme that is linked.

Improved affinity between the marked pesticide and antipesticide homologous antibody (anticamba antibody)

Derwent Class Codes:

- B04**: Natural products and polymers, testing, compounds of unknown structure;
- C06**: Biotechnology, plant genetics, veterinary vaccines;
- D16**: Fermentation industry;
- J04**: Chemical/physical processes and apparatus including catalysis;
- S03**: Scientific Instrumentation, photometry, calorimetry.

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