



Technology DRDO 084: DEPA Multi Insect Repellent

Insects are carriers (vectors) of dreaded diseases such as malaria and dengue. Various methods have been used for the control of these vectors in different ecological conditions with certain limitations. Because of the unavailability of m-toluic acid in India for the manufacture of N,N-diethyl m-toluamide (DEET), there is a need to develop an alternate effective and safe insect repellent.

Defence Research and Development Organization (DRDO) has developed a multi-insect repellent DEPA (diethylphenylacetamide) cream formulation. Extensive studies have been carried out for its bio-efficacy and toxicity including inhalation. No untoward effect on mammalian systems has been observed. The cream formulation has been accepted and recommended by the Director General Armed Forces Medical Services (DGAFMS).

The active ingredient in many commercially available products is diethyl toluamide, popularly known as DEET, the world's most extensively used protection against mosquito and other insect bites.

Toxicity:

DRDO has perfected its cream formulation after extensive laboratory and field trials in different ecological conditions for its bio efficacy and toxicity. It was found that DEPA cream is safe to human and very effective against variety of blood sucking organisms including land leeches for more than six hours duration. One application of DEPA cream in the evening will protect the user throughout night.

Cost:

There is DEET based cream in USA and other developed countries in use for several years, which is very costly and not affordable in India by the common man. DEPA cream is highly cost effective and efficacious against several organisms, even in hot humid conditions of the country.

Development Status

The Drug controller of India has granted license to manufacture the DEPA. State FDA of Pondicherry and Madhya Pradesh have licensed the DEPA formulations to commercialization. DRDO has transferred the technology, TOT, to three companies for production of DEPA cream on non-exclusive basis for a period of seven years to meet military requirement.

Worldwide Situation

DEPA has been tested and indigenously developed by DRDO and all Intellectual Rights reside with DRDO. No US EPA application in place. DRDO has applied for an Indian patent application, 1741/DEL/2005.

Partner Opportunities

DRDO is seeking a partner to assist with EPA approval process and marketing.

For additional information contact **Earle Hager**, IC² Institute Global Commercialization Group at **512-475-7789, 512-431-3940** or ehager@ic2.utexas.edu.

