

L I C E N C E O F F E R

METHOD OF DETOXIFICATION OF SULFUR MUSTARD BY USING HALOALKANE DEHALOGENASES

Description

Detoxification of sulfur mustard as an active component of the chemical weapon of mass destruction, by using the microbial enzymes haloalkane dehalogenases (EC 3.8.1.5).

Main advantage

The enzymes are highly efficient natural catalysts capable of detoxifying many times their own weight of the warfare agent lowering unit consumption of decontamination compositions. The enzymes are non-toxic, non-corrosive and non-flammable. They can function effectively under mild ambient conditions and neutral pH decreasing energy costs, increasing safety and reducing damage to equipment, facilities and the environment.

Main use

The protective formulations with content of the enzymes (creams or gels) for fast treatment of human casualties impacted by sulfur mustard after an accident or terrorist attack. Decontamination mixtures containing the enzyme (foams, microemulsions) for detoxification of sulfur mustard on the surface of military hardware, transportation, industrial and agricultural hardware, technical devices and constructional objects and elements of environment, that are contaminated by this highly toxic warfare agent.

Development stage

The decontamination activity of enzyme preparation was verified in laboratory conditions. Application of enzyme preparation in decontamination mixture and protective formulations are under development. The proprietary technology is at present protected by Czech Patent Application **PV 2005-352** and International PCT Patent Application **PCT/CZ 2006/000036**.

Commercial offer

Leveraging proprietary know-how and technology platform through licensing and collaborations. Contract research focused on development of specific products and applications.