DEVELOPMENT OF HERBAL NON-LETHAL SELF DEFENSE SPRAY " SJA GUARDIAN MIST"

TIFAC Core In Herbal Drugs and Department of Pharmaceutical Chemistry, JSS College of Pharmacy, Ooty have developed an herbal base non lethal self defense spray namely SJA guardian mist as an outcome of B.Pharm project of Mr. Jyodish .S .S and Ms. G. Abinaya. This spray is a non-lethal weapon or tools are designed to incapacitate an attacker temporarily which ultimately safe the women from the human attacker or to discourage assailants from initiating an attack. This spray contain herbal extract namely andrographis paniculata, malabar nut, garlic and pepper which is the safe and high protective medicine used from the age old days. The formulated self-defense spray demonstrated promising efficacy in initial tests. Upon contact, it induced temporary discomfort and disorientation in the attackers, effectively deterring potential assaults. This effect was attributed to the synergistic actions of andrographis paniculata anti-inflammatory properties, garlic's antimicrobial effects, Malabar nut's bronchodilator properties, and pepper's capsaicin-induced irritation.

The spray's effectiveness stems from its ability to capitalize on biological mechanisms, such as activating pain receptors and inducing respiratory discomfort. Safety considerations, including allergic reactions and optimal concentration levels, were carefully addressed to minimize potential harm. Practical application scenarios highlight the spray's portability and discreetness, making it a viable self-defense option for women.

Till now pepper spray are most widely used and has many limitation and governed by stringent regulations and guidelines established by governmental and law enforcement bodies. Law enforcement agencies worldwide commonly employ pepper spray as a non-lethal method for subduing suspects or managing crowds during civil unrest, valuing its effectiveness in temporarily incapacitating.

Till now three agents, o-chlorobenzylidenemalononitrile (CS), chloroacetophenone (CN), and oleoresin capsicum (OC) were commonly used to subdue an incoming threat from person. From these oleoresin capsicum (OC) or pepper spray was commonly available to the public constituting active ingredient as Capsaicin. DRDO developed a novel, eco-friendly less than lethal, chilly spray based on BhutJolokia (Capsicum assamicum) oleoresin for Indian troops for applications in the low intensity conflict (LIC) areas as well as for riot control, personal

protection &self-defence, crime prevention etc. Although pepper sprays were used by various countries as riot control agents or when exposure of military personal the pharmacological profile was still unaddressed. In an era where ensuring women's safety is of paramount importance, there is necessity to develop novel herbal non-lethal weapon (spray) as a self-defense and personal protection.

The current project was aimed to develop an innovative, practical and effective solution for a self-defense spray “SJA GUARDIAN MIST” tailored specifically for women. Drawing inspiration from age-old traditional remedies and modern scientific research, our formulation integrates the different potent properties of andrographis paniculata, malabar nut, garlic and pepper.

INNOVATION DEVELOPMENT TEAM STAFF MEMBERS:

- DR. S. P. DHANABAL
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- DR. SHANMUGAM
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PRODUCTION COST

- 400- 500 per sample at small scale
- 100-180 per sample at small scale

TECHNOLOGY TRANSFER

- Technology is ready for the launch and the final product can be transferred to the needed industry

TECHNOLOGY IMPORTANCE

- This can replace the pepper spray which is very effective and successful product available at market


Self defensible
SJA
Guardian Mist
INGREDIENTS
Manufactured By: