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Protection Against Chemical Warfare Agents

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Abstract

Chemical warfare agents are toxic chemicals controlled by the Chemical Weapons Convention (CWC).

Chemical warfare agents have been produced and used on a large scale. Tear gas grenades were used in 1914 by the French army at the outbreak of the First World War, but it was not until the German army used chlorine near Ypres in 1915 that the world entered the modern era of chemical warfare. The development and use of chemical warfare agent continued following the First World War despite the signing of the 1925 Geneva Protocol, which banned the first use of chemical weapons.

Concerns within the military troops and defense communities over possible terrorist use as well as the requirements of a verifiable CWC, have driven the development and application of analytical methods for the detection and identification of chemical warfare agents.

Analytical methods that are currently used for the detection and identification of chemical warfare agents are reviewed and classified by the number of dimensions of information they provide.

Recent world events involving the possibility of use chemical warfare agents have increased the need to develop an environmentally friendly universal decontaminating solution that possesses non-corrosive and non-toxic properties for the rapid neutralization of lethal chemical warfare agents. Decontamination systems are important because they allow rapid decomposition of the toxic compounds.

Key words: Chemical warfare agents; Decontamination; Detection, and Identificatio

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