

MITIGATION - SCIENCE AND TECHNOLOGY ADVANCES FOR CHEMICAL AND BIOLOGICAL HAZARD MITIGATION

Decontamination Experiments On Various Contaminated Coupons By Chemical Warfare Agents

Sangmoon Byun Agency for Defense Development **Sang Myeon Lee** Agency for Defense Development **Kyeong Min Cho** Agency for Defense Development **Heesoo Jung** Agency for Defense Development

Chemical warfare agents (CWAs) are well known as toxic chemicals that can cause death. These chemical weapons were widely used, developed, and stockpiled during World War, but most countries have joined the Chemical Weapons Convention (CWC) proposed in 1997 and are continuing to cooperate and make efforts to destroy their stockpiled chemical weapons. Nevertheless, decontamination operations are necessary to restore combat power and urban function after a chemical weapons attack.

This study is about basic experiments for interior/exterior decontamination of buildings, an essential technology for decontamination operations in urban areas. We plan to conduct research to remove contamination from chemical agents deposited on the interior and exterior surfaces of complex and diverse types of buildings in urban areas. These studies use a variety of environmentally friendly, non-corrosive decontamination agents (Hydrogen peroxide, peracetic acid etc.) and examines the results after contaminating coupons (Glass, wood, concrete, rubber etc.) used inside and outside buildings with chemical agents. We will show the results of decontamination experiments on various coupons using a non-corrosive decontamination agent based on hydrogen peroxide. Additionally, Based on this basic research, it will be applied to aerosol decontamination reactions.