

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

Chemical Hot Air Decontamination Of Complex Features And Realistic Items

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Chemical Hot Air Decontamination (CHAD) is a method of decontamination which uses heat and humidification to remove/detoxify the contaminants from assets without the need for harsh chemicals, such as bleach or caustic. CHAD requires contaminated items to be placed inside an enclosure that can be heated and humidified, which has air flowing through to allow any evaporated contaminants to be removed.

The Decontamination Sciences Branch (DSB) of US Army Combat Capabilities Development Command (DEVCOM) Chemical Biological Center (CBC) has utilized CHAD in small-scale laboratory studies as a method of removing contamination from absorptive surfaces, complex features, and realistic small items. Humidification up to 95% RH at 170°F (~243 g water/m³ air) have been evaluated. CHAD has been shown to remove a significant amount of contamination from materials within 8 h.

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