

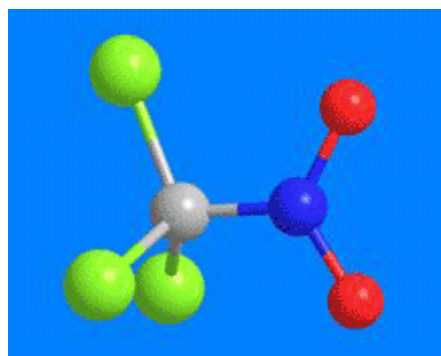
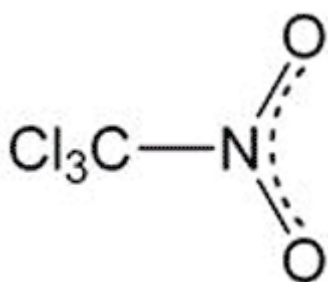
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Chloropicrin

March 03, 2015



Chloropicrin, or trichloronitromethane, is a dense, pale yellow liquid that decomposes when heated to ≥ 112 °C. Its property as a lachrymator prompted Germany to use it as a tear gas against the Allied forces during World War I—one of the first uses of a chemical weapon.

In 1848, Scottish chemist J. Stenhouse prepared chloropicrin by treating picric acid with sodium hypochlorite. Nitro groups were the only parts of the picric acid molecule to be used in chloropicrin, but the “picrin” name stuck. Today, chloropicrin is manufactured by the reaction between nitromethane and sodium hypochlorite.

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Chloropicrin has long been used as an agricultural soil fumigant because it is effective against a broad spectrum of fungi, nematodes, and insects. In 2008, the US Environmental Protection Agency reapproved

it for this use, but restricted its scope and required strict protections for farm workers. Additional restrictions have been applied since then. In early 2015, the California Department of Pesticide Regulation added even more stringent regulations on chloropicrin to protect workers and residents who live near fields where it is used



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