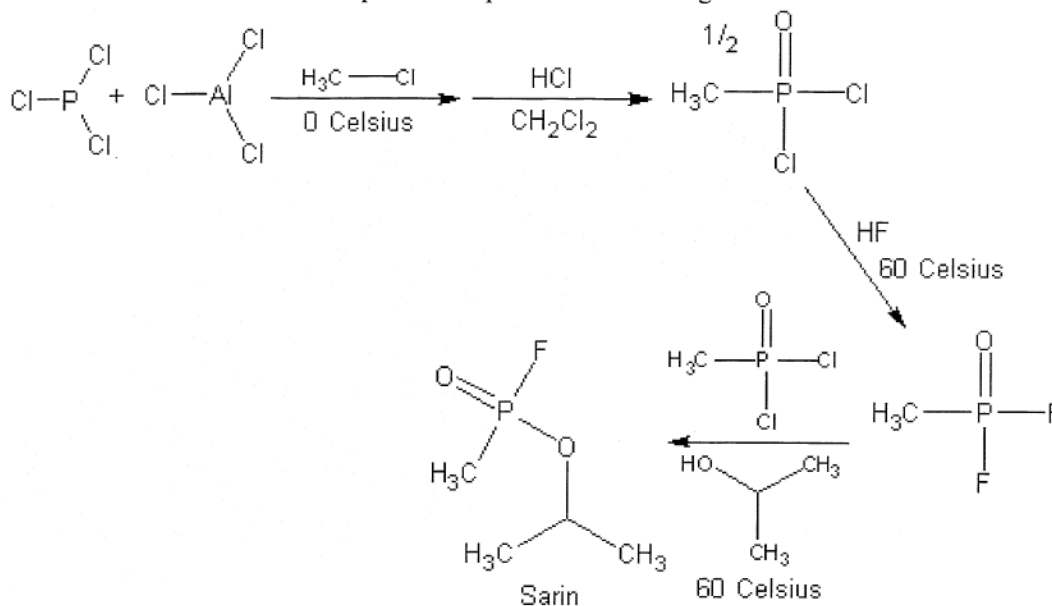


Chapter 10: Preparation of Nerve Agents



Reaction equation (by-products omitted)

Materials:	1. 10 grams of phosphorus trichloride	6. 3.1 grams of 48% hydrofluoric acid
	2. 9.7 grams of anhydrous aluminum chloride	7. 4 grams of anhydrous isopropyl alcohol
	3. 11 grams of methyl chloride	8. 30 grams of dry silica gel
	4. 246 milliliters of methylene chloride	9. 200+ milliliters of isopropyl ether
	5. 18.4 milliliters of 35 to 37% hydrochloric acid	

Hazards:



WARNING! WARNING! WARNING!

Do not attempt in anyway to prepare sarin using the following procedure unless proper safety precautions are taken. 1) Perform all operations in a clean box, which is treated with a nitrogen atmosphere, and in which is completely sealed from the air. 2) After each procedure, all glassware and non-electric equipment should be soaked in a bleach (sodium hypochlorite) solution before removing from the clean box. Any electrical equipment such as hot plates and stirring equipment should be carefully wiped down with a bleached soaked rag before removing from the clean box. 3) After the entire operation is complete, the entire clean box should be disinfected with bleach before opening the clean box to the air. 4) The desired sarin product should be stored in amber bottles, preferably non-breakable containers, and stored in a cool dry place away from sunlight. The bottles should also be placed inside an airtight sealed plastic bag, such as a 'ziplock' bag. 5) Storage of any and all nerve agents should be in airtight cabinets, drawers, or the like, and said storage spaces should be equipped with chemical agent detection monitors to alert of any potential leakage.

Use caution when handling methyl phosphonic dichloride, which is highly toxic, and can be absorbed through the skin causing mild nerve agent symptoms. Use care when handling phosphorus trichloride, and aluminum chloride, both of which can cause irritation of the skin and eyes, and both of which violently react with water evolving corrosive and toxic fumes. Use great care when handling hydrofluoric acid. The acid is highly toxic, and can cause sever tissue, and bone damage. Acid spilled on the skin should immediately be washed with large amounts of water, and a baking soda solution. Any personnel exposed to hydrofluoric acid upon the skin, or accidentally ingested should seek a hospital emergency room immediately for treatment. Wear gloves when handling concentrated hydrochloric acid, and avoid inhalation of the vapors.

Procedure: