

# SANTA ANA POLICE DEPARTMENT

DAVID VALENTIN · CHIEF OF POLICE

## TRAINING BULLETIN

*"Education promotes professional and responsive law enforcement"*

### Methamphetamine Clandestine Labs

#### Purpose

The purpose of this training bulletin is to assist field personnel and on scene supervisors in safely identifying and dealing with methamphetamine clandestine labs. This training bulletin will also allow officers to properly handle children found in labs, and make the appropriate notifications.

#### Introduction

During the 1960's and 70's, the most prevalent method to manufacture methamphetamine was using a chemical precursor known as Phenyl-2-Propanone (*P2P*). In 1979, the Federal Government regulated P2P. Consequently, by the mid 1980's, the most universal form of manufacturing methamphetamine was using ephedrine/pseudo ephedrine as the main precursor. Over the last several years, there has been a drastic increase in methamphetamine clandestine labs seized. Additionally, there has been a rise in other types of labs related to the overall process of manufacturing methamphetamine such as extraction labs and the production of hydriodic acid. Today, the larger scale [methamphetamine labs](#) have been controlled by Mexican National drug organizations, and their manufacturing preference is the "HI/Red-P" method.

The efforts to curb clandestine labs have been addressed by state and local agencies. The Bureau of Narcotic Enforcement and local agencies have established a clandestine lab call-out team, Orange County Law Enforcement Response Team (*OCLRT*), to respond and dismantle clandestine laboratories, and a task force (*PROACT*) was established to aggressively investigate clandestine labs. These cooperative efforts will lead to more efficient and successful investigation, dismantling, and prosecution of clandestine labs.

#### I. Lab Assessment and Call-Out Procedure

##### A. First Responder

When a clandestine lab is encountered, evacuate all persons from inside the lab or immediate danger area and place them in a secured location, preferably up wind from the lab. Officers should make mental notation of items observed inside the lab; this will aid the fire department and lab investigators in their investigation. Notify the **Santa Ana Fire Department Hazardous Materials Unit** if a functional lab is discovered or if there is an immediate threat, such as a leaking valve from a cylinder tank. It is vital to properly evaluate the condition of the lab so

that the Hazardous Materials Unit can properly assess the situation. A supervisor should be notified as soon as possible.

## B. Call-Out

The following guidelines should be followed for call-out procedures of clandestine lab personnel:

1. The responding supervisor should notify the Watch Commander and give an assessment of the situation:
  - a. Location of lab (*i.e. house, garage, apartment, storage locker, vehicle*);
  - b. Size, type, and number of containers present and type of equipment *i.e.* acetone containers, heating mantles, glassware;
  - c. If SAFD Haz-Mat Team has been notified;
  - d. How many children (*18 or younger*) were found in the lab.
2. The Watch Commander should call one of the following: Sergeant of Special Investigations-Narcotics Detail or their appointed designee; the designated Clandestine Laboratory Detective; or the Commander of Special Investigations.
3. If the Watch Commander is unable to contact any of the above personnel, the Watch Commander should notify the designated DOJ-BNE Orange Office, OCLRT on-call Duty Agent at pager number **(714) 346-0058** or The Department of Justice, Bureau of Narcotic Enforcement Command Center in Sacramento at **(916) 227-3244**. (*D.O.J. will notify the Orange County Lab Response Team to conduct the clean up.*)

## C. Handling Officer

1. Complete field interview cards on all involved parties.
2. Any arrestee(s), victim(s), or witness(s) taken from the lab should be left at the scene and **do not** transport to the Santa Ana Police Station in order to prevent further contamination. The clothes of involved people may be taken and booked by the Orange County Chemist.
3. Provide assistance to Santa Ana P.D. Detectives or lab personnel with arrestee(s) booking. SAPD Narcotic Detectives may be responsible for the arrest report. If only DOJ-BNE or OCLRT personnel respond to dismantle the lab, the handling officer will complete a Crime/Arrest report and handle arrestee(s) booking. The officer will refer to the BNE Report completed by lab personnel as to the particulars of the clandestine lab.

## D. Precautions

1. **OFFICER SAFETY IS ALWAYS FIRST AND FOREMOST.**
2. **DO NOT** handle anything

3. Do not turn on/off any switches, and do not turn the power off to the lab. If something is boiling over or leaking onto the ground, do not attempt to stop or clean it.
4. Once you leave the lab area, wash your hands with soap and water. If you become contaminated, immediately flush for 20-30 minutes with water the effected area.
5. Chemical odors can be harmful if breathed in or exposed to bare skin. Limit your exposure inside the lab to a minimum.
6. Notify the fire department hazardous materials unit for any lab that poses an immediate danger.
7. Only qualified personnel shall enter, dismantle, sample, or photograph a suspected lab.
8. Do not smoke, eat, or drink in or around the suspected lab.
9. Place crime scene tape to minimize exposure into the area and prevent any citizens from entering.
10. If possible, ventilate.

## II. Drug Endangered Children Project Procedures

The Drug Endangered Children Project (*DEC*) was established so police officers can intervene on behalf of the children who are exposed to methamphetamine clandestine laboratories. This program insures the safety of the children, and the vigorous prosecution of the adults who endanger children. The Drug Endangered Children Response Team (*DEC Team*) is a comprehensive county wide multi-agency response team coordinating law enforcement, Children and Family Services (*Child Protective Services*), and the District Attorney's Office. The below procedures must be followed when children are found or live at meth lab site:

1. **DO NOT RELEASE THE CHILDREN!**
2. Advise the designated Santa Ana P.D. Lab Detective or The Orange County Clandestine Lab Response Team that children were found in the lab. The lab team will assume the investigation and notify the DEC Team.
3. DEC Team members will respond to the scene and transport children to the hospital. They will process all evidence, complete reports, and conduct interviews as it relates to the children. Have an officer available to transport the children to St. Joseph-Choc Emergency Room and Orangewood.

## III. Clandestine Labs and Manufacturing Process

A clandestine laboratory is manufacturing, converting, processing, or preparing, by chemical extraction or chemical synthesis, a controlled substance. There are four types of labs:

1. **Extraction**-The raw material is changed into a finished product by the use of chemical solvents. The chemical structure of the drug is not altered.
  - a. Removing ephedrine from cold medication and converting it into powder ephedrine.

2. **Conversion**-A raw unrefined drug product is changed into a finished or refined drug. The chemical structure is changed.
  - a. Changing cocaine hydrochloride to cocaine base.
3. **Synthesis**-A combination of proper materials required for chemical conversion into a finished drug.
  - a. Converting pseudo ephedrine/ephedrine into methamphetamine.
4. **Tableting**-The machine process of the final drug products into a tablet form.
  - a. Converting ecstasy into pill form.

Clandestine labs will often be discovered under one of the following conditions: functional lab, non-functional, or boxed lab. A *functional lab* is in the actual stages of manufacturing methamphetamine, hydriodic acid, or extracting ephedrine. *Non-functional labs* are not manufacturing. A *boxed lab* is not functioning and is commonly stored or transported for later use. Boxed labs will often be stored in plastic containers, suitcases, or large duffel bags.

## IV. Extraction Process

The extraction process is often the first step in manufacturing methamphetamine because pure pharmaceutical ephedrine is rarely used. Therefore, ephedrine/pseudo ephedrine tablets found in nasal or bronchial medication needs to be extracted from the tablets. This process can be done at a separate lab or at the same location. The extraction labs pose a serious threat because of the flammable chemicals, such as acetone, denatured alcohol, and propane gas that are frequently found in these labs.

Ephedrine/pseudo ephedrine pills are crushed and placed into denatured alcohol, methanol, or water. The crushed pills will dissolve in the liquid. The liquid will rise to the top, and the white sludge will settle to the bottom. The sludge is the starch binder that was used to hold the shape of the tablets. The liquid will contain the ephedrine/pseudo ephedrine. The liquid is placed in cooking pots, and is heated. Stoves, propane stoves, and electric skillets are methods used to provide a heat source. The liquid will evaporate and a white residue, which is ephedrine/pseudo ephedrine, will remain.

## V. Synthesis: HI/Red-P Method

Ephedrine/pseudo ephedrine, hydriodic acid (*HI*), and red-phosphorus are poured into a flask. The mixture is heated for several hours and then cooled. The red phosphorus is filtered from the reaction mixture using bed sheets or coffee filters; the filtered red phosphorus can be stored for later use. Sodium hydroxide is added to the reaction mixture to make the reaction mixture basic. This is known as "*basing*." Since adding sodium hydroxide causes an exothermic reaction, ice is often added to reduce the amount of heat that is generated.

An organic solvent, such as Coleman fluid or freon, is then added. This creates a biphasic liquid mix. The liquid methamphetamine base is separated from the other chemicals. Depending on the solvent used, the methamphetamine liquid is on the top or bottom of the biphasic liquid. (*An example of a biphasic liquid is mixing oil and water; there is a distinct*

*separation*). The excess chemicals are removed and solvent layer containing the dissolved methamphetamine base will remain.

Hydrogen chloride gas or hydrochloric acid is added into the solvent layer and methamphetamine will crystallize in the liquid. The methamphetamine is compressed using mop buckets and bed sheets to remove any excess liquid. The excess liquid is gassed with hydrogen chloride gas or hydrochloric acid and more methamphetamine will be generated. Acetone is used to clean the methamphetamine.

## VI. Other Methamphetamine Manufacturing Methods

### A. Cold Method

This process requires no heat because the chemical reaction occurs naturally. The remainder of the process is the same. The cold method is often done for smaller quantities. Cookers will generally use ephedrine/pseudo, red phosphorus, and iodine crystals.

### B. Nazi Method

A modified method from the German Patent during World War II. Ephedrine/pseudo is combined with anhydrous ammonia and lithium metal during the cooking process.

### C. Hydrogenation

Ephedrine/pseudo, chloroform, thionyl chloride, ether, palladium black, hydrogen gas, and a hydrogenator are used in the process. No heating is required.

## VII. Associated Chemicals

### A. Solvents

Chemicals used to separate or purify chemicals in a reaction.

1. Freon, Coleman fluid, "STP" or other automotive fuel system cleaners (*HEET*), denatured alcohol, and acetone.

### B. Precursor

A raw material substance that becomes part of the finished product through a chemical reaction.

1. **Ephedrine/Pseudo ephedrine:** Ephedrine is naturally derived from an ephedra plant and is used as a bronchial dilator. Pseudoephedrine is synthesized and is used as a nasal decongestant.
2. Pharmaceutical ephedrine or pseudo ephedrine is a pure crystallized substance made by legitimate manufacturers. Having pharmaceutical ephedrine allows bypassing the extraction process. Pharmaceutical is rarely used unless it is stolen from the manufacturers.
3. An average of 70-80 % of ephedrine/pseudo will convert into methamphetamine.

## C. Reagents

Chemicals used to convert the precursors into the finished product.

1. **Hydriodic Acid (HI)**-can be manufactured by mixing red phosphorus, water and iodine crystals. The liquid ranges from clear to yellow to reddish in color.
2. **Sodium Hydroxide**- found in plumbing Drano or Red Devil Lye
3. **Hydrogen chloride gas(HCl)**- Can be made by adding sulfuric acid (*battery acid*) and salt or mixing muriatic acid (*swimming pool*) and aluminum (*foil*). HCl can be found in large cylindrical tanks or small-pressurized tanks.
4. **Red Phosphorus (Red P)**- burgundy/red powder. Stored in glass containers or plastic.
5. **Iodine crystals**- white/gray pellets or flakes. Stored in glass containers or plastic bags. Iodine crystals leave yellowish stains and are very corrosive.

## D. Catalyst

A substance that initiates a chemical reaction.

1. Sodium Hydroxide-water reactive
2. Lithium-water reactive
3. Palladium Black-solvent reactive

## E. Cutting Agents

A common cutting agent used is methylsulfonylmethane (*MSM*) or dimethylsulfone (*DMSO*). Both chemicals are used as horse dietary supplements to increase flexibility and can be purchased at a tack & feed store.

## VIII. Equipment

Heating mantle, rheostat, pressure cookers, vacuum pump, funnels, canning jars, crock pots, glass jars, water jugs with spigots, blenders, food processors, coffee filters, glass pyrex pans, kitty litter, bed sheets, mob buckets, hydraulic lifts with metal plates, 5-gallon paint buckets, plastic or rubber tubing, air purifying mask, rubber gloves, chemist style glass apparatuses.

## IX. Cost Analysis/Measurements

### A. Red Phosphorus

50 kilos (110) lbs.= \$8,000-\$10,000

1 pound=\$220-\$400

### B. Iodine

50 kilos=\$9,000-\$9,500

1 pound=\$100-\$200

### C. Freon

5 gal.=\$850-\$900

### D. Ephedrine/Pseudo

Case of 144 bottles of 60

Tablets/ 60 mg. per bottle=\$3,500-\$4000

Pharmaceutical:

Half tin (27.5 pounds)=\$40-\$60,000

Tin (55 pounds)=\$75-\$85,000

### E. Hydriodic Acid

5 gal=\$5,000-\$5,200

2.5 gal=\$2,600

1 gal=\$1,125

### F. Sodium Hydroxide

50 gal. bucket =\$250

## G. 22 Liter Setup

Flask, electronic rheostat,=\$1,900-\$2,100

heating mantle

## H. HCL Gas

100 pounds factory tank=\$6,000-\$7,500

Illegally refilled=\$4,000

Price list from LA HIDTA 2<sup>nd</sup> Quarter 2005

## X. Quantities/Measurements

1. One 22-liter flask can generate up to 12-15 pounds of methamphetamine.
  - a. 15 lbs. ephedrine/ pseudo ephedrine
  - b. 2 ½ gal. of HI
  - c. 2 lbs. of Red P
2. 2 gallons of Hydriodic Acid
  - a. 16.5 lb. iodine crystals
  - b. 1 ¼ pound of red phosphorus
  - c. 2 gallons of water

Liquid Volume	(Meth Oil)	Apparatus	Yield
1 pint	6-8 ounces of meth	1 liter flask	6-8 ounces of meth
1 qt..	12-16 ounces of meth	5 liter flask	1.5-3 pounds of meth
1 gallon	3-5 pounds of meth	22 litter flask	8-15 pounds of meth

## XI. Laws

**HS 11379.6 (F)** - Manufacturing

**HS 11379.7 (F)** - Minor (**16 or below**) present at location of manufacturing

**HS 11383a, c (F)** - Possession of precursor chemicals with intent to manufacture

**HS 11104.5 (M)** - Possession of glassware, apparatus with intent to manufacture

**HS 11353.6 (F)** - Manufacture within 1000 ft. of school grounds when in session or when children are using school facility

**HS 11366.5a (M/F)** - Rents or makes available for manufacturing

**HS 11366.6 (F)** - Utilizing a fortified location to manufacture

**PC 12022a (F)** - Armed with firearm in the commission of felony

**PC 12022c (F)** - Armed with firearm, whether loaded, unloaded, or inoperable

**PC 12022d (F)** - Vicariously armed while manufacturing or attempting to manufacture

**PC 182 (F)** - Conspiracy

**PC 273a (F)** - Child endangering (**under 18**)

## Summary

Methamphetamine clandestine labs are a serious problem to law enforcement and the community. It is important for officers to understand the process of manufacturing methamphetamine, so they can identify the dangerous hazards. Established guidelines will ensure safety precautions are followed to minimize the risk to officers and the community.

**Acknowledgment:** This training bulletin was researched and prepared by Inv. Ruben Ibarra, Special Investigation with the assistance of the Bureau of Narcotic Enforcement and the Orange County District Attorneys Office. This training bulletin replaces TB 96-02. 8/01

**Reviewed By:** Detective G. Garcia

**Revision Date:** November 2006