

# INTRODUCTION

*Chemicals Used for Illegal Purposes* is a reference book for police and other responders who might encounter chemicals upon entering a home, abandoned alongside the road, or in a facility. The book contains an alphabetical list of chemicals that can be used to make or are used in:

Ammunition	Designer drugs	Other
Amphetamines	Explosives	Recreational drugs
Arson	Fireworks	Tear agents
Chemical weapons	Hobbies (various)	Toxics
Date rape drugs	Illegal drugs	

The purpose of the book is to identify quickly what a person may be doing with any set of given chemicals. Although the majority of these products will be illegal, some, such as recreational drugs and fireworks, may be legal in some areas; hobbies generally include chemicals (although hazardous) that are legal. (We have included these at the request of people who have been embarrassed by overreacting to legal activities involving chemicals.) The inclusion of hobby chemicals may also be a help when determining the nature of an illegal chemical disposal along the side of a road.

A person finding a stockpile of chemicals can first look them up in the alphabetical list. Under each chemical will be a list of products that can be made using that chemical. A typical list entry follows. See the Glossary for definitions of all the acronyms used in the list.

## ACETONE

$\text{CH}_3\text{COCH}_3$

67-64-1

UN 1090

**Appearance:** Colorless viscosity 1 liquid. Acetone is available in 1-quart or 1-gallon rectangular metal containers that can be purchased at any hardware store. It can also be purchased at any chemical supply house in 4-liter bottles. Industrially, acetone is sold in 5-gallon metal cans.

Acetone has so many uses that it is NOT a good chemical to key off for the identification of activity.

**Odor:** Nail polish remover.

**Hazards:** The primary hazard is the high vapor pressure (180 mmHg @ 30°C). The vapors are extremely flammable and intoxicating. Flash point -4° F; LEL 2.5%; UEL 12.8%; Group D atmosphere; LD<sub>50</sub> 9.75 g/kg; PEL 1000 ppm.

**Incompatibilities:** Incompatibility Group 6-B. Nitric acid, chromium trioxide, chloroform (in the presence of sodium hydroxide, potassium hydroxide, or ammonia), and acetaldehyde.

### Used in

#### Amphetamines:

Synthesis 3

Synthesis 6

Synthesis 17

Synthesis 18, Supplementary 2

Solvent, methamphetamine hydrochloride extraction (Syntheses 3 and 6)

Most methamphetamine syntheses end up by making a methamphetamine base product. In Synthesis 6, acetone and ether are mixed and chilled and then added to the cook. In Syntheses 3 and 6, methamphetamine · HCl crystals (final product) are obtainable directly without making a base. In these methods the polar solvent acetone is used to extract (really, just wash) the product. Methamphetamine does not dissolve in acetone. *Note:* There is no need to "salt" methamphetamine hydrochloride, as it is already salted. Since acetone will not dissolve methamphetamine hydrochloride, it is used to cleanse methamphetamine hydrochloride crystals. Several washings produce a whiter final product. Acetone may be seen as part of a two-phase (solid and liquid) mixture. Acetone may be used to clean substandard product by the end user. Acetone is added to benzene to make P-2-P (Synthesis 17). It is mixed with calcium hypochlorite to make chloroform.

#### Chemical Weapons:

Facility 4, N1-1 and 2

Facility 4, N2-1

Facility 4, N3

Facility 5

Facility 14

#### Explosives:

Acetone peroxide; astrolite, Supplementaries 2 and 3; ADN; DANP; DINA; DNAN; DNAT; DNFA-P; β-HMX; HNBP; HNTCAB; PETN; picryl chloride; plastic explosives, Variation 6; TATB; tetrazide; TNA; TND; TNEN; TNTPB

#### Illegal Drugs:

Cook 1, Variation 1

Cook 2, Variation 7

Cook 4, Supplementary 2

Cook 5, Variation 1

Cook 6, Variation 2

Cook 9

#### Tear Agents:

Chloroacetone

#### Toxins:

Ricin

**Regulations:** CDTA (List II) 150 kg; RQ 2270 kg; Waste Codes D001 and U002; Hazard Class 3; PG II; ERG 127.

**Confirmed by:** Carbonyl Test.

Finding one chemical will usually not determine what a person is doing. This is especially true of chemicals such as acetone or sodium hydroxide, which are used for just about everything. It will usually take a group of four or five chemicals to locate a formula. A typical formula will look like this:

**Styphnic acid**

**(Secondary explosive)**

TOXIC

Flammable; deflagrates; may detonate

1.

Resorcinol

16% Nitric acid

Sodium nitrite

60% Nitric acid

In this case resorcinol is the key chemical in identification because it is the most unique component of styphnic acid. However, there are many chemicals which on their own will determine a product. An example of this is:

**$\alpha$ -BUTYROLACTONE**

$C_4H_6O_2$

96-48-0

**Appearance:** Hygroscopic, colorless, oily liquid with medium solubility in water. This is a common solvent and reagent in chemistry, and is used as a floor stripper, an aroma compound, a stain remover, and a paint stripper.

**Odor:** Weak characteristic odor.

**Hazards:** Even before being reacted, this can be a substitute for GHB.

**Used in**

**Date Rape:**

GHB, Variation 1

We have tried to provide as much information about every chemical as we could. However, for some of the more obscure chemicals, very little information is available. Since so many of the formulas come from the underground, some of the chemicals named may not exist. We have used the name given in the formula, since that is what you may expect to find at the site; however, we do try to explain what the real chemical may be.

The chemicals we found most difficult to locate were those (1) used to make high explosives [we feel that many of these may be obscure synonyms (the same author may use three or four synonyms for a chemical in the same document) or intermediates (we have identified some as intermediates, such as the Grignard reagents)]; (2) used to make chemical weapons (we feel that once listed, the chemicals tend to disappear from commerce;

computer searches often found them on restricted lists, but not for sale, nor was there information as to their chemical characteristics); (3) used to make designer drugs [once again we often found these listed but not for sale, nor was safety data information available; we have marked such chemicals with a (w)].

We emphasize the common names, not the official names of a chemical. This is a responder's help book, NOT a chemistry book. In every case we try to cross-reference the real name as well as the product that a chemical can be purchased in commercially. This means that the chemical may appear three or four times in the alphabetical list, referring you back to the common name. If we can, we try to present what the chemical looks and smells like, its primary hazards, and, if possible, what it is incompatible with, and regulations that apply.

Since hobbies constitute such a broad area, only hobbies that might be confused with illegal operations are included. This may seem an odd list. For example, making root beer is included in hobbies because it uses chemicals that might also be used to make Ecstasy. Model rocketry is included because it uses many chemicals that might be used to make either fireworks or explosives. Photography is included because it includes the use of many exotic and hazardous chemicals.

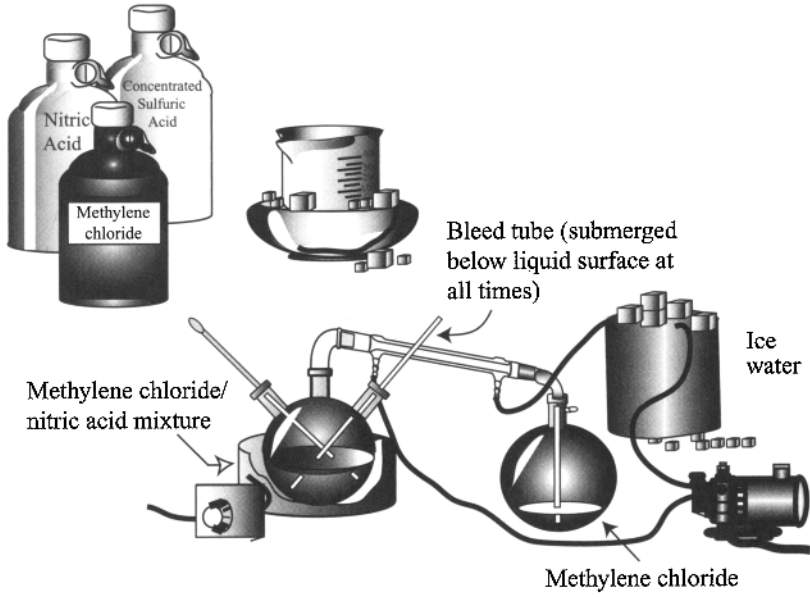
The book will not be of very much use when encountering a "mad chemist" who simply has been taking chemicals home for years. This book is directed more toward kitchen, garage, or bedroom setups used to make legal or illegal products.

We are interested in telling the responder how something is made, not how to make it. The formulas are generally all that we provide. However, there are certain cases where we provide more information. Examples include the manufacture of chemical weapons, where some of the apparatus is very dangerous. On the next page is an illustrated expanded reaction (99% nitric acid), which is included because a responder who sees this setup should recognize that it is a very DANGEROUS situation. Opening the apparatus pictured could result in injury or death.

These formulas are from many sources; and all are readily available; some are on very sketchy parts of the Web, some at Amazon.com, some from vanity (self-published) publications, and some from totally undocumented publications. We have included some formulas that *we know will not work*, as we assume that someone will try them. For the same reason, we have included formulas which if attempted by an amateur would probably result in injury or death. Some of the references were written by people who, judging from what they wrote are, at the least, pretty scary.

**Process 2**  
Making 99% Nitric Acid

Variation 1



Variation 2

