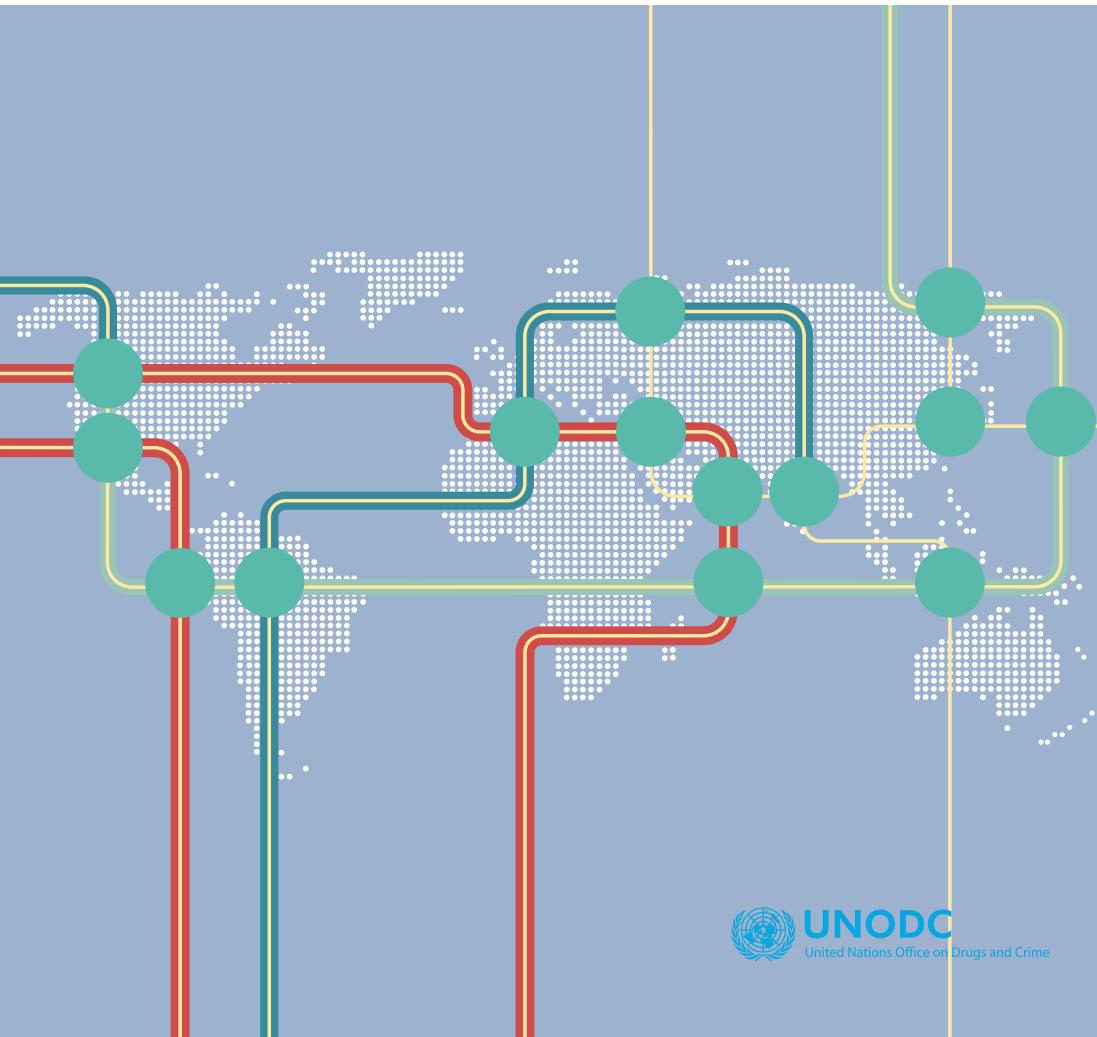


Drug & Precursor Trafficking:

A field guide for frontline officers



UNODC

United Nations Office on Drugs and Crime

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Drug & Precursor Trafficking: A field guide for frontline officers

This publication contributes to Sustainable Development Goal 16 that seeks to: "Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels"



The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice. The Goals interconnect and in order to leave no one behind, it is important that we achieve each Goal and target by 2030.

INTRODUCTION

Trafficking in drugs and the precursor chemicals used in their illicit manufacture are among the most serious and frequently encountered of transnational crimes. The movement of these substances from sources of production to destinations for consumption generate significant illicit profits and threaten the health and welfare of people, families and societies. Many thousands of illicit drug users die tragically each year.

As a frontline law enforcement officer, you may encounter drugs and precursors being smuggled or trafficked. These cases need to be handled with a high degree of caution and professionalism.

You should carry this guide with you while you are on duty. It contains tools to address situations you may experience in the course of your duty.

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1. SOURCES OF INFORMATION

Information can be gathered from a variety of different sources.
These can be divided into 5 categories:

Workers

- Fishermen
- Construction workers
- Street vendors
- Sex workers



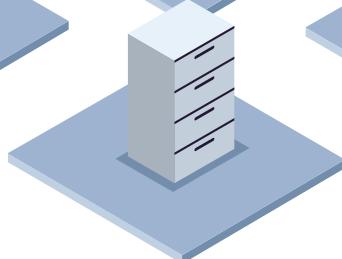
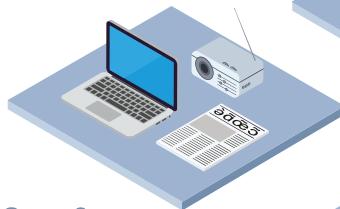
Service Providers

- Taxi drivers
- Bus operators
- Social workers
- Shipping agents NGOs



Open Source

- TV/Radio
- Print media
- Internet



Criminal Sources

- Informants
- Suspects



Official Sources

- Officers from your agency
- Other government agencies
- International agencies
- Neighboring Border Liaison Offices

2. MANAGING INFORMANTS

An informant is a person who secretly provides information to law enforcement agencies.

Informants may have different motives for giving information, including for money, for revenge, to eliminate competition, to boost their ego or for goodwill.



When meeting an informant:

- Make an official record of the meeting
- Meet in a safe, predetermined location
- Identify a safe route to and from the meeting place
- Develop a cover story for you and the informant in case you are seen meeting together
- Have another officer present during the meeting

When communicating with an informant:

- Develop nicknames for each other
- Use a new phone or SIM card that cannot be traced or used for any other purpose
- Develop rules and procedures for contacting each other
- Ensure the informant tells no one about assisting you
- Avoid meeting at offices, police stations, bars, etc.

Remember:



- Abide by your agency's standard operating procedures on informant handling.
- Do not disclose the identity of the informant to anyone who does not need to know.
- Maintain a professional relationship with the informant. The informant is not your friend.
- The informant's safety is paramount, so develop contingency plans.
- Stay in control of the informant.
- Be available when the informant needs you.

3. INTELLIGENCE REPORTS

Once you have received information from a source, you must complete an intelligence report as soon as possible. Remember, the source could be from the community, a government agency, or a general informant. The report should comply with your agency's guidelines and contain the following information:

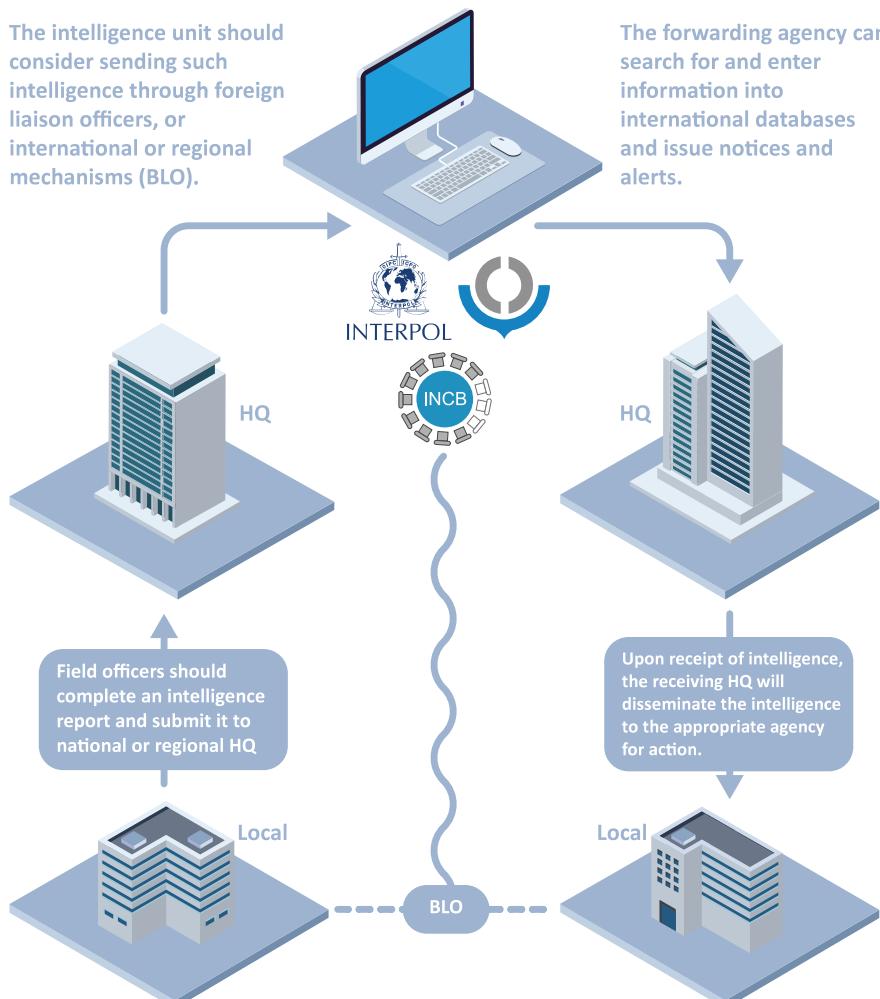
- Date of the report
- Subject
- Officer making the report
- Account of the information provided (who, what, when, where, why, how)
- Your assessment of:
 - (a) the reliability of the source and
 - (b) the accuracy of the information



The report should not contain any information that may reveal the identity of the informant. Do not include the informant's name, alias, sex, date of birth, occupation, contact details, or clues leading to their identity. Submit the completed report through authorized channels without delay so that the information can be assessed and, if necessary, disseminated.

4. SHARING INTELLIGENCE

If the intelligence report contains information that may assist a foreign law enforcement agency, then you should send it to your national intelligence unit.



You are likely to have a number of options when deciding operational tactics.

When a shipment of illicit drugs, smuggled precursors or a suspicious shipment of precursors or other chemicals is discovered, you may have a number of options when deciding operational tactics.

1. Seize it (drugs or smuggled precursors)
2. Stop the shipment (suspicious precursor or other chemicals)
3. Conduct a controlled delivery (drugs or smuggled precursors)
4. Conduct a monitored delivery (suspicious precursor or other chemicals)

There are often pros and cons for each of these options.

Remember, even if your country has not yet ratified legislation criminalizing precursor or other chemical smuggling, the evidence you gather may be of vital importance to foreign law enforcement agencies.

See Section 10 on Controlled Deliveries for more information.



Always bear in mind legal considerations for your decision!

6. OPERATIONAL ORDERS

You may find yourself operating in rural, urban or maritime environments, which will present different challenges and potential hazards. Take into account the safety of the investigators, suspects, and bystanders when planning operations. While planning, considering the following points.

Information

Describe everything the team needs to know about the operation, including suspected offences.

Intention

What do you want your investigation to achieve?

Method

How are you going to achieve it? Think of resources needed, separate transportation for suspected smugglers, traffickers, and victims, and preparing medical care.

Administration

Consider all the logistical details necessary, such as timing, meals, support staff to deal with multiple suspected smugglers, traffickers, and victims, as well as media.

Risk Assessment

Conduct a risk assessment as per Section 7 on Assessing Risks in this field guide.

Communications

How are the team members going to communicate with each other?



Keep the operation secret. Only tell those who need to know, including other colleagues. Do not discuss the operation anywhere that members of the public can overhear.

Address potential risks before commencing your operation in order to:

- protect you and your colleagues from harm,
- ensure the safety of any bystanders,
- ensure the safety of your suspects, and
- ensure that your investigation is not hindered.

For drug and precursor trafficking cases, consider the following:

- Is anyone in immediate danger?
- Are the substances labelled or otherwise known?
- Are the substances harmful or toxic, and if so how should they safely be handled, stored or transported?
- Are the substances flammable or explosive, and if so how should they be safely handled, stored or transported?
- Is the location an illicit drug manufacturing laboratory with a potential for fire or explosion?



Precursors and other chemicals can be transported in unlabelled or wrongly labelled containers. If you are suspicious about the type of chemical being transported seek assistance from suitably trained officers or the fire brigade.

7. ASSESSING RISKS

When planning an operation, complete a risk assessment table to prioritize which risks need the greatest attention and what measures can be taken to reduce the levels of the risks.

1. What is the hazard?
2. What is the likelihood of the hazard causing harm? low (1) to high (10)
3. How severe are the consequences? low (1) to high (10)
4. What is the greatness of the risk?
(Multiply the LIKELIHOOD by the SEVERITY)
5. How can the risks be mitigated?

1 HAZARD	2 LIKELIHOOD (1 to 10)	3 SEVERITY (1 to 10)	4 RISK (LIKELIHOOD x SEVERITY)	5 MITIGATION
Lightning strike	1 X 9		= 9	Avoid being in open areas during storms
Car accident	4 X 6		= 24	Ensure drivers are competent and vehicles are well maintained.
Violent suspects				
Migrants don't understand the language used by your police team				

Watching suspects can be a very useful way of gathering intelligence and evidence of a crime. The main types of surveillance you might use are as follows.



Mobile

Good for covering distances and when the suspect is using a vehicle.

Use several vehicles to follow the suspect. Use nondescript vehicles of different makes, models and colors. Rotate vehicles to avoid overexposure. Use two officers per car. Motorbikes are useful, too.



Marine

When following vessels, use navy or marine police vessels or aircraft that have the ability to track vessels from a long distance away.

Use unmarked or nondescript boats to get closer to the targeted vessel. You may also be able to watch vessels from the shore using a combination of mobile, foot or static surveillance methods.

8. SURVEILLANCE



Foot

Good for following suspects who are walking or using public transport. Allows you to get closer to the suspect and observe their actions, meetings or hear conversations. Use at least three officers where possible. Rotate your positions to avoid being noticed.



Static

Good for watching fixed locations like ports, houses, businesses or areas where a

specific crime occurs. Use two officers. Be careful entering and leaving an observation post to avoid being compromised. If no buildings are available, use a vehicle or other hideout.



Technical

Good for providing real-time locations of suspects. Use covert cameras and tracking and listening devices to monitor suspects remotely, if you are lawfully entitled to use them.



Safety first: Don't put yourself at risk. Use sufficient officers and vehicles to avoid being compromised. Make sure your equipment is charged and ready for use.



Remember: It's better to lose the suspect than to compromise the investigation.

With lawful authority, the following technical surveillance options can provide crucial evidence and intelligence.



Listening Devices

Listening devices allow you to covertly monitor conversations. They can be installed in places where suspects will have discussions, including vehicles, vessels, premises and public places. The signal of the device can be picked up by radio or sent via phone lines.

Listening devices can be worn covertly by undercover officers and informants.

Video Surveillance

Video cameras allow you to collect visual evidence and intelligence.

Images can be collected by:

- Closed circuit television cameras (CCTV)
- Cameras that can monitor the subject from afar, sending images remotely
- Handheld cameras in observation posts, on foot or within a vehicle
- Body-worn cameras to covertly record meetings
- Mobile phone cameras used covertly



9. TECHNICAL INVESTIGATIONS

Phone Interception

Phone interceptions also allow you to covertly monitor conversations. Monitoring phone conversations usually requires special authority and liaison with the telecommunications provider.



Intercepting Online Communications

The ability to monitor emails, chats, social networks, online banking, and online voice calls (such as Skype, LINE, Viber) usually requires special authority and liaison with the service provider. It may also require installing a device inside the suspect's computer.

Controlled deliveries are a useful technique allowing you to follow the movement of illicit goods and may help to identify the destination of contraband and people involved in trafficking.

Consider these steps when planning a controlled delivery:

- Do you have the appropriate authority to conduct the controlled delivery?
- Do you have cooperation from national and international counterparts?
- Is there sufficient time to launch an operation?
- Be careful not to disturb the good arousing suspicion.
- Replace some of the contraband with substitutes.
- Where possible use a tracking device, but be aware of their limitations (range, battery life, etc.).



If the substance is suspicious but not regulated in your country (e.g., caffeine), consider performing a monitored delivery to gather additional intelligence about its destination and potential for illicit use.

11. PRESERVING A CRIME SCENE

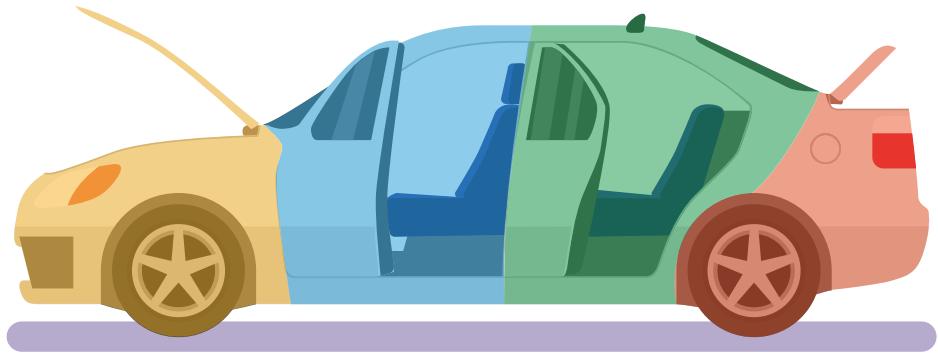
As the first officer at a crime scene, you should take immediate steps to preserve the scene and protect evidence from weather or from contamination.

1. Ensure that no one is hurt and that all suspects have been secured.
2. Create a cordon around the scene. A safe bet is to identify what you think is a large enough area, and then double it. It is easier to reduce the size of a crime scene than to expand it.
3. Keep crowds or the media out of the crime scene. Establish a crime scene log of anyone entering or leaving the scene and their reasons for doing so.
4. Mark out a 'safe route' to allow access to the scene, avoiding any paths that may have been used by the suspect.
5. If you have to process the scene, take many photographs.
6. Make notes of your actions at the scene. Note what you see, hear, touch and, if necessary, smell.



- Do not allow unnecessary or unauthorised people into the scene.
- Consider how to preserve the scene to prevent weather damage.
- Beware of safety hazards at the scene, such as diseases.

12.1. Searching a Crime Scene: Vehicle Search



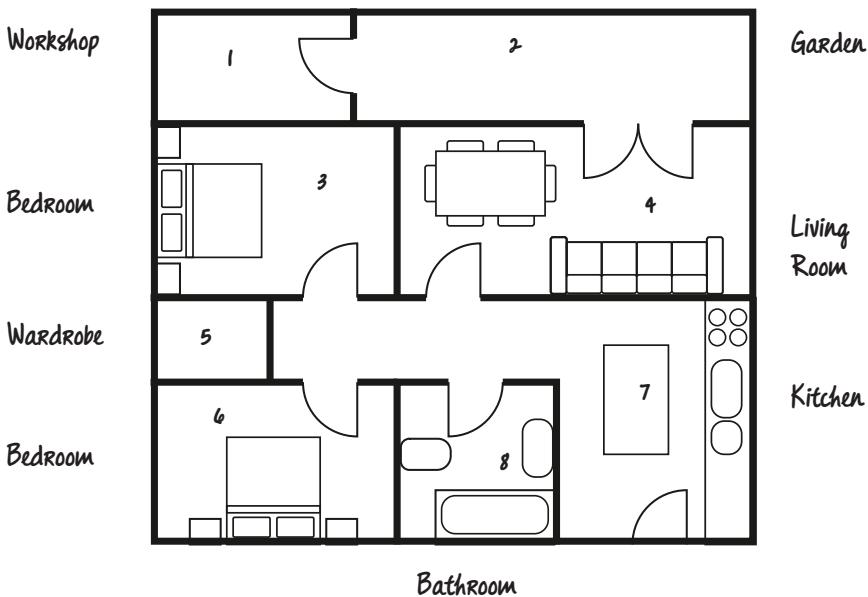
Engine area **Interior Front** **Interior Back**
Trunk **Exterior and underside**

1. Draw a sketch plan of the vehicle.
2. Divide the search area into manageable parts, such as boot/ trunk, bonnet/engine area, interior front, interior rear, exterior and underside.
3. Search each area systematically and safely, overlapping where necessary.
4. Complete the search in one area before moving to the next area.
5. If you find evidence, record it in its position and seize it.

For information on seizing and packaging evidence, refer to the section on Evidence Preservation in Section 14.

12. SEARCHING A CRIME SCENE

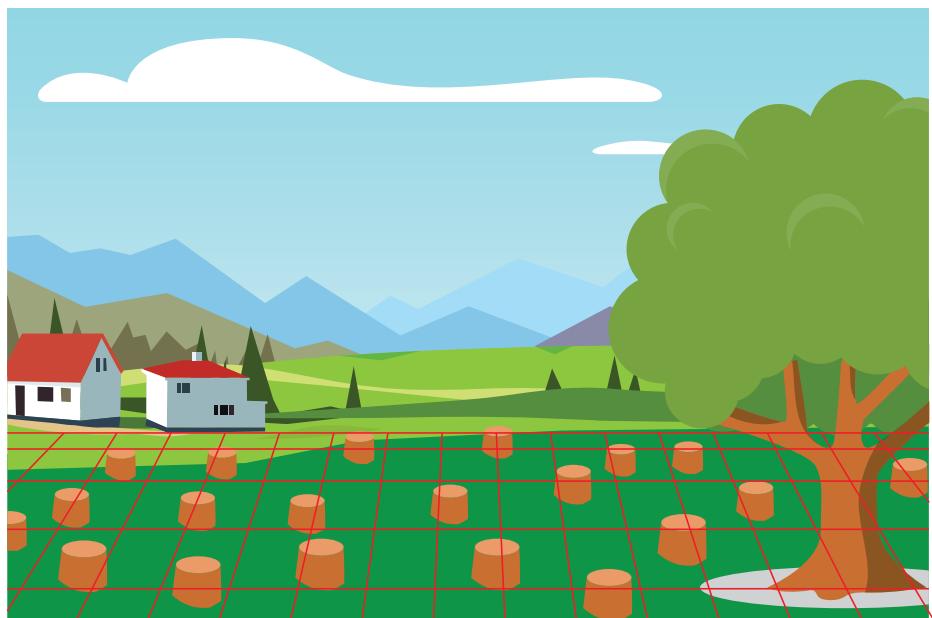
12.2. Searching a Crime Scene: Premises Search



1. Draw a sketch plan of the premises, including outside areas.
2. Divide the search area into manageable parts, such as living room, bedrooms, office, kitchen, bathroom, laundry, attic, basement/cellar, driveway, front/back yard and any outbuildings. Divide large rooms into manageable parts.
3. Search each area systematically and safely, overlapping where necessary.
4. Complete the search in one area before moving to the next area.
5. If you find evidence, record it in its position and seize it.

For information on seizing and packaging evidence, refer to the section on Evidence Preservation in Section 14.

12.3. Searching a Crime Scene: Rural Search

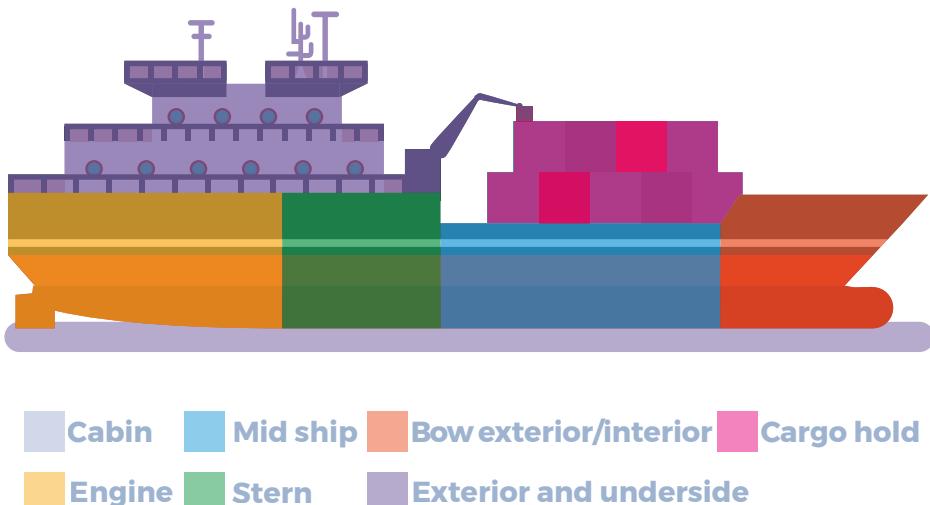


1. Draw a sketch plan of the area or mark the area on a map.
2. Divide the search area into manageable parts using a grid system.
3. Search each area systematically and safely, overlapping where necessary.
4. Complete the search in one area before moving to the next area.
5. If you find evidence, record it in its position and seize it.
6. For information on seizing and packaging evidence, refer to the section on Evidence Preservation in Section 14

For information on seizing and packaging evidence, refer to the section on Evidence Preservation in Section 14.

12. SEARCHING A CRIME SCENE

12.4. Searching a Crime Scene: Vessel Search



1. Draw a sketch plan of the vessel.
2. Divide the search area into manageable parts, such as bow exterior/interior, cabin, mid-ship exterior/interior, stern exterior/interior, cargo hold, engine area, underneath the vessel.
3. Search each area systematically and safely, overlapping where necessary.
4. Complete the search in one area before moving to the next area.
5. If you find evidence, record it in its position and seize it.

For information on seizing and packaging evidence, refer to the section on Evidence Preservation in Section 14.

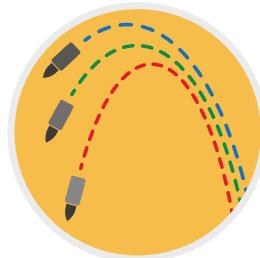
Remember, there are risks associated with searching a moving vessel. Only use properly trained and equipped personnel to search a moving vessel.

Many items of evidence can be subject to forensic examination. Consider the following techniques.



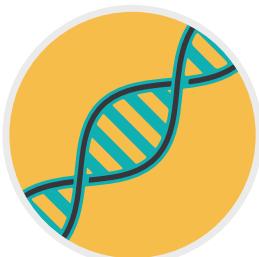
Fingerprints

Can be found on many objects, including smooth surfaces, paper, and people. If authorised, take the suspect's fingerprints when you arrest them, even if they have been taken before.



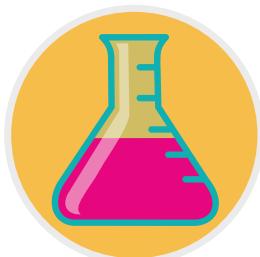
Ballistics

Compare seized ammunition with seized firearms to determine which were used in crime. These items may match other unsolved crimes.



DNA

Can be taken from people and most animal or plant products. Good sources are blood, hair and other bodily fluids.



Chemical Analysis

Examine products such as paint, poisons or other chemicals to look for common characteristics linking crime scenes.



Always seek advice from a forensic specialist

13. FORENSIC CONSIDERATIONS



Mechanical Fit

Pieces of evidence may fit together in a unique way.



Document Examination

Forensic examination of travel documents, identification cards or birth certificates may reveal that they are counterfeits or have been fraudulently altered



Handwriting Analysis

Compare the suspect's handwriting to that found on documents, cheques, notebooks, diaries etc.



Computer Forensics

Laptops, SIM cards, portable storage devices and cards may hold valuable evidence of contacts, communications or financial information.



Always seek advice from a forensic specialist



1. Before moving an object, photograph the object in the location where you found it.



2. Complete an evidence label. Place the label on the evidence bag before putting the object inside.



3. Using gloves, place the object into the labelled evidence bag.



4. Seal the bag completely.



5. Hand the item to the Evidence/Exhibit Officer.

Certain objects must be sealed and stored in special ways. If you are unsure how to seal and store an object, consult a forensic specialist for advice before handling the object.

15. FOLLOW THE MONEY TRAIL

When persons are suspected of involvement in transnational crime, investigate their financial situation. Financial analysis can help identify the ring leaders of criminal networks.

When conducting surveillance:

1. Which banks do they use?
2. Which credit cards do they use?
3. What vehicles do they use?
4. What properties are they in control of?

When searching a crime scene, look for:

- Bank documents
- Property documents
- Business records
- Financial records
- Computers
- Cash
- Receipt books
- Invoices
- Passports



When interviewing a suspect:

- Establish their income and expenses
- Ask them about properties and assets they own or lease and how they were funded
- Establish what businesses they own
- Establish who they work for

Also consider:

- Obtaining court orders or warrants for examination of financial records, including bank records and tax returns
- Using services of a forensic accountant to examine financial records
- Conducting business and property checks
- Conducting forensic examination of computers

Extra care needs to be taken when searching people to ensure the safety of the officers conducting the search, of the suspect being searched and to prevent the disposal of evidence.

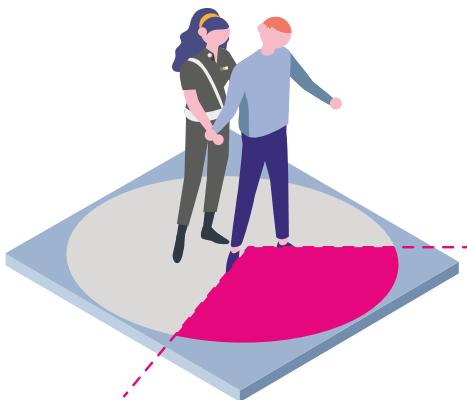
Before the search:

- Inform the suspect of the reason for the search, of the powers you are using to conduct the search and of their legal rights.
- Ask the suspect if they are armed or in possession of something that may harm himself/herself or others.
- Check the area around you for evidence or items that the suspect may have discarded or may use to harm himself/ herself or others.
- Have another officer present during the search.
- Have a female officer search female suspects.
- If not accompanied by another officer, secure the suspect, especially if the suspect is prone to being violent.

During the search:

- If possible, conduct the search in a quiet area away from direct public view.
- Search the suspect systematically from head to foot, covering all areas including inside the suspect's mouth.
- Remove outer items of clothing, such as hats, gloves, belts, shoes, from the suspect to search the items more thoroughly.
- Gently feel clothing for objects as you search.
- When searching, avoid standing or crouching directly in front of the suspect.
- Pat pockets and ask the suspect if the pockets contain harmful objects before putting your hand in the pockets.

16. SEARCHING PEOPLE



- Put any found objects aside for later examination or seizure.
- Search bags separately after completing the search of the suspects.

If you are armed, keep your firearm away from the suspect while searching.

Have a colleague present during the search.

Your colleague should watch you searching to observe the suspect's movements or if the suspect discards evidence.



Watch the suspect for any signs of aggression.

If a more thorough search is required, such as a strip search or internal examination, then follow your agency's guidelines in relation to these more intrusive searches and gender considerations.

17. INTERVIEWING SUSPECTS

When interviewing suspects:



- Have two officers present
- One officer should take notes
- Record the interview when possible
- Consider the legal rights and welfare of the suspect
- Consider the need for an interpreter
- If the suspect is a juvenile, consider the need for a social worker or other authorised support person

Follow this PEACE system for interviewing the suspect:

STEP	DESCRIPTION
Planning	Think about the evidence you have or need and the questions you plan to ask. Write down your plan and discuss it with your colleagues or supervisor.
Engage and Explain	Introduce yourself, and allow the suspect to introduce himself/herself. Assess his/her welfare: under the influence of drugs or alcohol, in need of sleep? Try establishing a rapport with the suspect. Explain the purpose of the interview.
Account	Obtain a complete account of the event. Ask open ended questions to allow the suspect to give a detailed account. Clarify the suspect's answers and challenge elements of the account. Ask colleagues if they have any questions of the suspect.
Closure	Summarise what has happened. Explain the next steps.
Evaluation	With your colleague, assess the interview in context with the other evidence. Decide your next steps.

17. INTERVIEWING SUSPECTS

Sample Interview Questions For Suspected Traffickers:

- Who owns the drugs/precursors we found?
- What substance is it?
- Where specifically did you get the substance?
- What were you going to do with the substance?
- Who packaged them that way?
- How much did you pay for the substance?
- How much were you going to sell them for?
- How do you determine the weight of the substance?
- What other substances do you sell?
- How much do you sell?
- Who do you sell the drugs/precursors to?
- How long have you done this?
- How do you record your sales?
- How many people work for you (or who do you work for)?
- How do you communicate with these people?
- How many mobile telephones do you use to conduct your business (and what are the numbers of your telephones)?
- Do you use a code when you talk about the substances?
- If you use a code what are the code words you use?

Sample Interview Questions For couriers: (Drugs or precursors)

- Who gave you the substance?
- When and where did they give you them?
- What instructions did they give you in relation to transporting the substance?
- How do you communicate with them?
- Who do you have to give the substance to?
- Where and when will this happen?
- How will you know what the person meeting you will look like?
- How much are you being paid to carry the substance?
- How are you going to be paid?
- Who booked your transportation? Where? When?

Sample Interview Questions for For couriers: (Precursors only)

- Where did you obtain the precursors?
- Who is the consignor of the precursors?
- What is their address/ phone number?
- Who is the consignee of the precursors?
- What is their address/phone number?
- Which company are the precursors from?
- What was written on the packaging?
- Do you have an invoice or bill of lading?



Try to build up a complete picture of the suspect's involvement in the crime and who the suspect's associates are.

18. DRUGS

Many substances look like controlled drugs but are in fact everyday products. Traffickers will often describe drugs by their street names, which vary from country to country. A field test kit is a good way to indicate the presence of a controlled drug. There are 244 drugs currently under international control. Below is a partial list of commonly trafficked drugs under international control:

Cannabis

Cannabis is found naturally as plant leaf/ stem/ bud material and brown resin (hashish) forms.

Street names: Pot, Marijuana, Laddu, Ganja, Grass, Green, Hashish, Weed, Bud, Smoke, Reefer, Mary Jane, Skunk.



Opium

Opium is the dried latex obtained from the opium poppy. It is a sticky brown resin from which morphine and heroin are produced.

Street names: When-shee, Yen Shee Suey, Chinese Molasses, Ah-pen-yen, Choi.



Heroin

Heroin is made from morphine, which is extracted from the opium poppy. In its purest form, it is a fine white powder, but more often it is rusty grey, brown or black in color.

Street names: China Red, China White, Horse, Hurricane, H, Gear, Smack, Tar or Chiva



Methamphetamine

Methamphetamine is a synthetically manufactured stimulant. It is found as glass-like shards (crystal), white or offwhite powder or in tablet form (yaba).

Street names: (crystal) Batak, Bato, Yaaba, Yama, Ya Ba, Crack, Ice, Crystal, Philopon, Batuwhorse, Batu Kilat, Shabu, Chakk, Ma Chakk, Meth.



MDMA

(3,4-methylenedioxy-methamphetamine or Ecstasy)

MDMA is a synthetically manufactured drug. It is often found in brightly colored powder and tablet forms.

Street names: E, Ecky, X, Candy, Pills, Kbai, Ecstasy, ya-E, Seik kway say, ya Love, Shaking Pill, Pingers.



Cocaine

Cocaine is derived from extracts of the coca bush. Its purest form is a fine white powder, but can also be found in freebase and rock-like (crack) forms.

Street names: Coke, Blow, Crack, Yo, Yaya, Yeah Oh, Coco, Snow, Big C, Flake, Koks, Lady.



Numerous other drugs are under domestic controls in your country

19. PRECURSOR CHEMICALS

Nearly every drug requires precursor chemicals in their manufacture. These potentially hazardous chemicals are widely used in legitimate industries, but can be diverted to make drugs, therefore it is important to determine:

1. the specific precursor found, and
2. whether the person or company is authorized to handle that precursor.

Your national regulatory agency licences companies authorized to handle precursors.

Many substances look like controlled precursors but legitimate precursors and other chemicals will be marked with an appropriate label identifying potential hazards. Traffickers often mis-declare, mis-label or remove labels from containers making identification difficult – never assume the substance is what a suspect declares. A field test kit is a good way to indicate the presence of a controlled precursor.

Always use gloves, masks and safety goggles when handling chemicals.



Explosive



Flammable



Oxidizing



Compressed gas



Corrosive



Toxic



Irritant



Environmentally
damaging



Health hazard

There are 24 precursors currently under international control split into higher (Table I) and lower (Table II) levels of control. The list of chemicals named is not exhaustive.

Table I (Essential Precursors)

Name and information	Photograph
<p>1-Phenyl-2-propanone (P-2-P) Vicious, colorless or pale yellow liquid used in the pharmaceutical industry for legitimate manufacture of amphetamines. Illicit use: amphetamine / methamphetamine Other names: Benzyl methyl ketone (BMK) HS code: 2914 31 00 CAS No.: 103-79-7</p> 	 
<p>3,4-Methylenedioxymethyl-2-propanone (3,4-MDP-2-P) A colorless or pale yellow liquid with an odor of aniseed, with almost no known legitimate uses. Illicit use: MDMA (ecstasy) Other names: Piperonyl methyl ketone (PMK) HS code: 2932 92 00 CAS No.: 4676-39-5</p> 	

Table I (Essential Precursors)

Name and information	Photograph
<p>Acetic anhydride A colorless liquid with a very strong vinegar odor, used widely in the manufacture of cellulose acetate, aspirin, brake fluids, dyes and explosives, and in textile bleaching and metal polishing.</p> <p>Illicit use: heroin and amphetamine/methamphetamine Other names: Acetyl acetate</p> <p>HS code: 2915 24 00</p> <p>CAS No.: 108-24-7</p> 	 
<p>alpha-Phenylacetooctonitrile (APAAN) A white to pale yellow crystalline powder with a slight vague smell of bitter almonds, which has no known legitimate use.</p> <p>Illicit use: amphetamine / methamphetamine</p> <p>Other names: 3-oxo-2-phenylbutanenitrile</p> <p>HS code: 2926 40</p> <p>CAS No.: 4468-48-8</p>  	

Table I (Essential Precursors)

Name and information	Photograph
<p>Ephedrine A colorless, sometimes white orange yellow fine crystal soapy to the touch, used in herbal supplements.</p> <p>Illicit use: methamphetamine</p> <p>Other names: 2-(Methylamino)-1-phenyl-1-propanol</p> <p>HS code: 2939 41 00 CAS</p> <p>No.: 299-42-3 50-98-6</p> <p>Herbal supplements containing ephedrine can be used to make methamphetamine</p> 	 
<p>Ergometrine Colorless crystals or needles which turn brown when exposed to humidity or light, used in migraine treatment and during child birth (labor) in extremely small amounts.</p> <p>Illicit use: LSD (Lysergic acid diethylamide)</p> <p>Other names: ergonovine, lysergic acid, 2-propanolamide</p> <p>HS code: 2939 61 00</p> <p>CAS No.: 60-79-7</p> 	

19. PRECURSOR CHEMICALS

Table I (Essential Precursors)

Name and information	Photograph
<p>Ergotamine Colorless crystals or needles which turn brown when exposed to humidity or light, used in migraine treatment and during childbirth (labor) in extremely small amounts.</p> <p>Illicit use: LSD (Lysergic acid diethylamide)</p> <p>Other names: Cafergot®, Ergomar®</p> <p>HS code: 2939 62 00</p> <p>CAS No.: 113-15-5</p> 	 
<p>Isosafrole Vicious, colorless or pale yellow liquid with an odor of aniseed, used in the perfume industry and for manufacture of piperonal.</p> <p>Illicit use: MDMA (ecstasy)</p> <p>Other names: 5-(Prop-1-enyl)benzo[d][1,3]dioxole</p> <p>HS code: 2932 91 00</p> <p>CAS No.: 120-58-1</p> 	 

Table I (Essential Precursors)

Name and information	Photograph
<p>Lysergic acid White crystals or crystalline powder used in organic synthesis and medical research in very small amounts.</p> <p>Illicit use: LSD (Lysergic acid diethylamide)</p> <p>Other names: 7-Methyl-4,6,6a,7,8,9-hexahydroindolo[4,3-fg]quinoline9-carboxylic acid</p> <p>HS code: 2939 63 00</p> <p>CAS No.: 82-58-6</p> 	
<p>N-Acetylanthranilic acid A fine colorless or white crystalline powder, used in the manufacture of pharmaceutical products, plastics and in fine chemistry</p> <p>Illicit use: methaqualone</p> <p>Other names: 2-acetamidobenzoic acid</p> <p>HS code: 2924 23 00</p> <p>CAS No.: 89-52-1</p> 	

19. PRECURSOR CHEMICALS

Table I (Essential Precursors)

Name and information	Photograph
<p>Norephedrine White crystals with a faint odor of benzoic acid, used in the manufacture of nasal decongestants and appetite suppressants.</p> <p>Illicit use: amphetamine</p> <p>Other names: Phenylpropanolamine</p> <p>HS code: 2939 49 00</p> <p>CAS No.: 14838-15-4</p> 	 
<p>Phenylacetic acid (PAA) A white to yellow powder with a strong unpleasant sweat or urine odor, used in penicillin manufacture, the flavoring and perfume industry and cleaning solutions.</p> <p>Illicit use: amphetamine, methamphetamine and 1-Phenyl-2-propanone (P-2-P)</p> <p>Other names: alpha-toluiic acid</p> <p>HS code: 2916 34 00</p> <p>CAS No.: 103-82-2</p> 	 

Table I (Essential Precursors)

Name and information	Photograph
<p>Piperonal Sparkling colorless needle-shaped crystals with an odor of vanilla and cherry, used in organic synthesis, and the perfume, flavoring and pesticide industries.</p> <p>Illicit use: MDMA (ecstasy) Other names: Heliotropin HS code: 2932 93 00 CAS No.: 120-57-0</p> 	 
<p>Potassium permanganate Odorless dark violet crystals with a metallic blue sparkle, commonly used in bleaching, disinfectants, anti-bacterial and in water purification.</p> <p>Illicit use: cocaine, methcathinone Other names: Chameleon mineral, Cairox® HS code: 2841 61 00 CAS No.: 7722-64-7</p> 	 

19. PRECURSOR CHEMICALS

Table I (Essential Precursors)

Name and information	Photograph
<p>Pseudoephedrine Odorless white crystalline powder or needle-shaped crystals, used in cold medicines.</p> <p>Illicit use: methamphetamine</p> <p>Other names: 2-methylamino-1-phenylpropan-1-ol, Actifed®, Sudafed®</p> <p>HS code: 2939 42 00</p> <p>CAS No.: 90-82-4 345-78-8</p> <p> Cold medicines containing pseudoephedrine can be used to make methamphetamine. Encountering lots of cold medicine tablets is a sign of precursor trafficking.</p> <p></p>	 
<p>Safrole Colorless or slightly yellow liquid or crystals with a pleasant candylike odor, used in the perfume and flavoring (cherry and vanilla) industries and for manufacture of piperonal.</p> <p>Illicit use: MDMA (ecstasy) and piperonal</p> <p>Other names: 5-(2-propenyl)-1,3-benzodioxole</p> <p>HS code: 2932 94 00</p> <p>CAS No.: 94-59-7</p> <p> The substance is often found as oils rich in safrole, such as sassafras oil.</p> <p></p>	 

Table II (Primarily Acids and Solvents)

Name and information	Photograph
<p>Acetone Very fluid clear colorless volatile liquid with a sharp, faintly aromatic odor, used as a common solvent used for manufacture of lubricants, plastics and paints.</p> <p>Illicit use: amphetamines, cocaine, heroin, LSD, methaqualone</p> <p>Other names: 2-propanone</p> <p>HS code: 2914 11 00</p> <p>CAS No.: 67-64-1</p> 	 
<p>Anthranilic acid A white to pale yellow crystalline powder, used in the manufacture of dyes, perfumes and insect repellent.</p> <p>Illicit use: methaqualone</p> <p>Other names: 2-aminobenzoic acid</p> <p>HS code: 2922 43 00</p> <p>CAS No.: 118-92-3</p> 	

19. PRECURSOR CHEMICALS

Table II (Primarily Acids and Solvents)

Name and information	Photograph
<p>Ethyl ether</p> <p>Very fluid colorless volatile liquid with a highly characteristic strong irritating odor, used in the chemical and pharmaceutical industries to extract oils, and in the manufacture of ammunition, plastics and perfumes.</p> <p>Illicit use: Solvent used in most drug manufacture</p> <p>names: Ethoxyethane, diethyl ether</p> <p>HS code: 2909 11 00</p> <p>CAS No.: 60-29-7</p> 	 
<p>Hydrochloric acid</p> <p>A clear colorless to pale yellow liquid with a strong acrid pungent odor, used in the manufacture of chlorides and hydrochlorides.</p> <p>Illicit use: Acid used in all drug manufacture</p> <p>Other names: Muriatic acid</p> <p>HS code: 2806 10 00</p> <p>CAS No.: 7647-01-0</p> 	 

Table II (Primarily Acids and Solvents)

Name and information	Photograph
<p>Methyl ethyl ketone (MEK) A clear colorless liquid with a sharp acetone odor, used in the manufacture of solvents and for degreasing.</p> <p>Illicit use: heroin, cocaine</p> <p>Other names: Butanone</p> <p>HS code: 2914 12 00</p> <p>CAS No.: 78-93-3</p>	
<p>Piperidine A clear colorless liquid with a strong peppery or ammonia odor, used in pharmaceutical industry for anaesthetics and analgesics and in the manufacture of rubber and plastics.</p> <p>Illicit use: phencyclidine (PCP)</p> <p>Other names: Hexahydropyridine, azacyclohexane</p> <p>HS code: 2933 32 00</p> <p>CAS No.: 110-89-4</p>	

19. PRECURSOR CHEMICALS

Table II (Primarily Acids and Solvents)

Name and information	Photograph
<p>Sulphuric acid A clear viscous, colorless liquid, commonly used in the manufacture of fertilizers, industrial explosives, dyes, paper, cleaning agents and batteries.</p> <p>Illicit use: morphine, cocaine, amphetamines</p> <p>Other names: Sulfuric acid</p> <p>HS code: 2807 00</p> <p>CAS No.: 7664-93-9</p> 	 
<p>Toluene A clear colorless liquid with a strong benzene odor, used as a common industrial solvent in the manufacture of benzaldehydes, explosives, dyes and coatings.</p> <p>Illicit use: amphetamines, cocaine, methaqualone</p> <p>Other names: Methylbenzene</p> <p>HS code: 2902 30</p> <p>CAS No.: 108-88-3</p> 	 

Clandestine laboratories require specialized equipment in the illicit manufacture of drugs. There are many different types and styles of equipment and officers should familiarize themselves with the more commonly encountered pieces, including:

- Beakers and glassware
- Plastic or metal drums
- Large capacity flasks
- Electro-thermal heating mantles
- Pressure reaction vessels
- Pill presses/ tabletting machines
- Punches and dies

When encountering laboratory equipment, always question whether it makes sense for the owner to possess such equipment. If you are unsure, contact your regulatory agency.



Use extreme caution when entering a suspected laboratory— seek assistance from suitably trained officers or the fire brigade.

20. LABORATORY EQUIPMENT



Drug laboratory (small, garage)



Drug laboratory (large, warehouse)



Tablet punches



Tableting machine (large)



Reaction vessel



Glassware and heating mantle



Heroin laboratory (indoor, small)



Heroin laboratory (outdoor, large)

20. LABORATORY EQUIPMENT

As you carry out your duties, it is important that you are on the look out for laboratory equipment, know how to detect their presence and what to do when you have located a clandestine laboratory.

Laboratory equipment can be located for illicit drug manufacture just about anywhere, including a small house or apartment, a garage, in a warehouse, in a factory, on a farm or in a remote jungle.



If you see a vehicle with such equipment and there is no legitimate reason for transporting this equipment, then you should be suspicious.

20. LABORATORY EQUIPMENT

There are signs that laboratory equipment may be being used to make illicit drugs. The process leaves physical signs such as:

- The unusual need for large water tanks on the property
- Chemical wastes dumped in the ground or in nearby streams
- The unusual need for high amounts of electricity at buildings
- Empty drums, cans, bottles or other chemical containers on the property
- Residents never putting trash out or instead burning it
- Specially constructed chimneys to get rid of strong odors
- Strong odors such as solvents emanating from a location



Remember, there are risks associated when unknown chemicals are dumped. Only use properly trained and equipped personnel to search a chemical dumpsite or suspected drug laboratory.



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