Hazardous Incident Response Team

SAN DIEGO CITY FIRE DEPARTMENT HAZMAT

COUNTY OF SAN DIEGO HAZMAT

GOT QUESTIONS?

NOT SURE ABOUT WHAT YOU HAVE ENCOUNTERED?

CALL AND CONSULT WITH HAZMAT THROUGH:

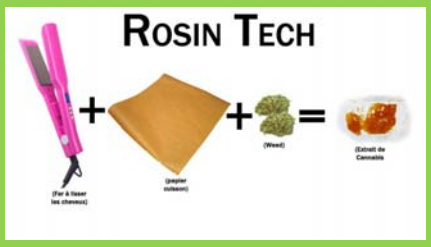
SDFD DISPATCH 858-974-9891 (24/7)

COUNTY HAZMAT 858-505-6673 Business Hrs.

619-778-3591 (24/7)

THC EXTRACTION METHODS

LOW RISK

ICE WATER & DRY ICE	LIQUID NITROGEN	ROSIN
	Oxygen Displacement Possible 	

MEDIUM RISK

LIQUID CARBON DIOXIDE	LIQUID SOLVENT	REFRIGERANT
Oxygen Displacement Possible High Pressure! 	Flammable Liquid Hazards 	If on fire, generates toxic & corrosive acid gases 

HIGH RISK

BUTANE BLASTING	*BUTANE PASSIVE CLOSED LOOP*	*BUTANE ACTIVE CLOSED LOOP*
HIGHLY FLAMMABLE 	HIGHLY FLAMMABLE NO PUMP 	HIGHLY FLAMMABLE HAS PUMP 

BUTANE EXTRACTION HAZARDS

This is the HIGHEST RISK method of all extraction techniques!

Response Guidelines (No fire)

1. Consult with Haz-Mat
2. Set a safe zone and pull a charged hose line.
3. Eliminate ignition sources. Be careful of static discharge.
4. Secure the utilities (Gas & Electric). Be cautious of scabbed electrical directly into the main power line. Cut services at the pole if needed.
5. DO NOT PLUG IN OR UNPLUG ANYTHING! IGNITION SOURCE!
6. Do not open the refrigerator or freezer.
7. 4-Gas monitor, used close to the floor 0-6". Exit if % LEL starts to climb up >1%. PPE FFTO ensemble.
8. THC Oil extractors can be mistaken for a pipe bomb. If a pipe bomb is suspected, call the Bomb Squad.
9. Labs can have multiple (96 cans per-case) full 10 oz. cans of butane or large cylinders of butane, bigger than propane tanks. Some can be 4' tall.
10. Open blasting of butane allows the gas to accumulate in the immediate area on the floor, butane is 2x heavier than air.
11. Closed loop systems can be under pressurized butane.

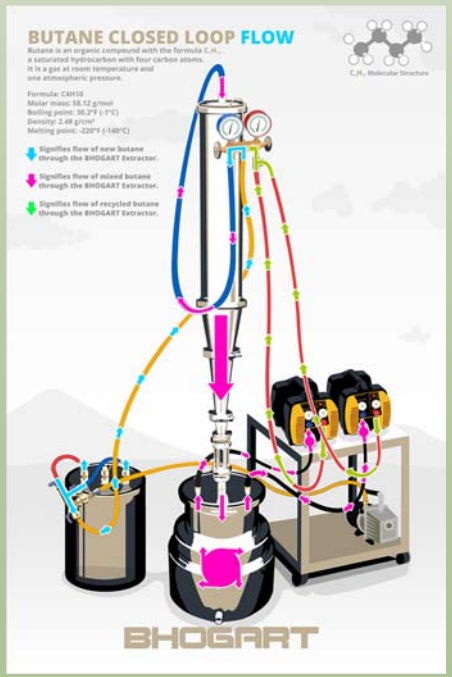
Response Guidelines for BHO labs on fire

1. Take a defensive posture
2. Large risk for small gain
3. The only exception is for a known life safety situation, with survivable conditions and power hazards mitigated or addressed to reduce the risk.

BHO First Responder Safety

First responders may not be aware that they are standing in low lying butane gas upon arriving on scene. This study looks at flammable levels, ignitions sources, pressure and temperatures generated. Video can be seen here BHO STUDY.

Supplies needed for blasting butane



Active closed loop butane extraction system

Liquid Carbon Dioxide Hazards

Hazards

1. High Pressure ~5000 PSI.
2. Oxygen deficient atmospheres
3. PPE FFTO with 4-Gas meter
4. Exit when O_2 reads 20.8%

Large liquid CO_2 extraction system in an enclosed space can create oxygen deficient atmospheres.

Liquid Solvent Hazards

Hazards

1. Flammable liquids with flash-points less than <140°F
2. Solvents used include: Everclear, Tequila, Isopropyl alcohol and hexane
3. Often found in the freezer, refrigerator or coolers
4. Stove fires occur due to cooks trying to boil off the alcohol

Refrigerator exploded due to accumulated flammable vapors.

Refrigerant Hazards

This type of extraction system is not common.

Hazards

1. Oxygen displacement
2. OSHA PEL 5000 ppm
3. That means get out at 20.8% O_2
4. If on fire generates highly corrosive and toxic gases!

*You may see AC recovery tanks, these do not normally contain refrigerant. They typically contain highly flammable butane. Treat like a propane tank.

Refrigerant extraction closed loop system

INDOOR GROW HAZARDS

1. Oxygen displacement from CO_2 generation, exit at 20.8% O_2
2. Multiple propane tanks used to generate CO_2
3. Possible refrigerant cylinders to charge AC in grow room
4. Potential elevated CO due to incomplete combustion of propane.
5. PPE FFTO with 4-Gas meter
6. Pesticides, don't touch them without nitrile gloves.
7. Structure modifications; false walls, covered windows, security bars on windows inside
8. Electrical hazards; bypassed, overloaded, exposed wires

CO_2 generator fueled by propane

Fertilizers and pesticides

Outdoor grow operation

OUTDOOR GROW HAZARDS

1. Very toxic pesticides!
2. When wet can produce Phosphine gas, toxic by inhalation! Aluminum Phosphide or Phostoxin is an example.
3. Don't touch containers!
4. Use nitrile gloves; NO LATEX
5. Gasoline/Diesel spills from generators

Aluminum Phosphide