



17th St. & Constitution Avenue N.W.
Washington, D.C. 20006
United States of America

Organization of American States

P. 202.458.3000
www.oas.org

INTER-AMERICAN DRUG ABUSE
CONTROL COMMISSION
CICAD

Secretariat for Multidimensional Security

FORTY-SEVENTH REGULAR SESSION
May 3 - 5, 2010
Washington, DC

OEA/Ser.L/XIV.2.47
CICAD/doc.1792/10
29 April 2010
Original: Español

ADULTERANTS AND SYNTHETIC DRUGS CHEMICAL DESCRIPTION OF
SYNTHETIC DRUGS TRADED IN BOGOTA, COLOMBIA
BY HECTOR BERNAL CONTRERAS
DIRECCION NACIONAL DE ESTUPEFACIENTES



Libertad y Orden

Dirección Nacional de Estupeficientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Adulterants and synthetic drugs Chemical Description of Synthetic Drugs Traded in Bogotá-Colombia



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

The worst danger for the consumers of this type of drugs is considering that all synthetic drugs are equal.



In the countries inside Andean region it is totally unknown the composition of the synthetic drugs that are traded.

In consequence, the traffic of contaminated substances represents another danger, where chemical composition is an enigma for all the people involved in the production-traffic-consumption chain.



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Background

- There were no technical-scientific studies that will allow to recognize contaminated substances inside synthetic drugs.
- Every sized synthetic drug is reported to the Colombian Drug Observatory (ODC) as Ecstasy
- Latest studies and investigations point that there is an increase in the Synthetic Drug (SD) consumption in young people.
- There have not been developed intervention processes based in the SD used in the country.



Dirección Nacional de Estupeficientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Main Objectives

- Design intervention strategies based in scientific evidence
- Make a chemical description of the synthetic drugs traded in Bogotá



Dirección Nacional de Estupeficientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Specific Objectives

1. Standardize a methodology for sampling (Statistics) and synthetic drugs chemical analysis (CG/EM)
2. Design an early intervention strategy based in the results
3. Design a Drug Demand Reduction program based in the results



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

- There was held an intelligence analysis during 2 months.
- 130 trade areas in the whole city.
- 104 sampling spots.
- 330 samples.



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Samples

266 Tablets

44 Capsules

11 Strips or patches

9 Liquids





Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Gas Chromatography/ Mass Spectrometry

- Extraction with solvents and in acid environment.



- Qualification and Quantification
- Active Principle (ingredient)
- Active and Inactive adulterating
- Vehicles (adjuvant)
- Occluded Solvents



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

From the obtained
extracts from 330
samples, in 260 there
were found different
substances.

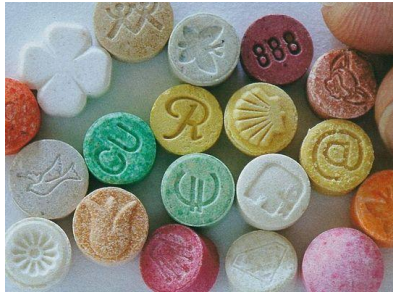




Dirección Nacional de Estupeficientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA



Caffeine was the substance found in major proportion (in 176 samples) equal to 53% of the total.

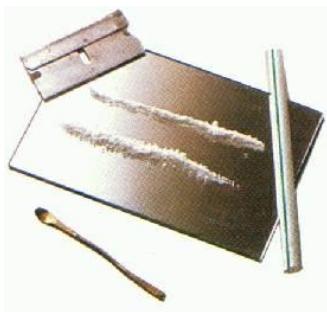
Only 17% of the samples showed MDMA content.



Dirección Nacional de Estupeficientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA



The following substances in order of appearance are Cocaine (Stimulant) and Levamisole (Dewormer) each one with 41 cases.



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

COCAINE

- 28% of 41 samples that contain cocaine possess more than 50 % of this substance as active principle.
- In 44% of the samples, cocaine is present in percentages among 0 and 2% of the active principle.
- Important concentrations of cocaine as active principle, were found principally in Trips



Dirección Nacional de Estupefacientes
República de Colombia



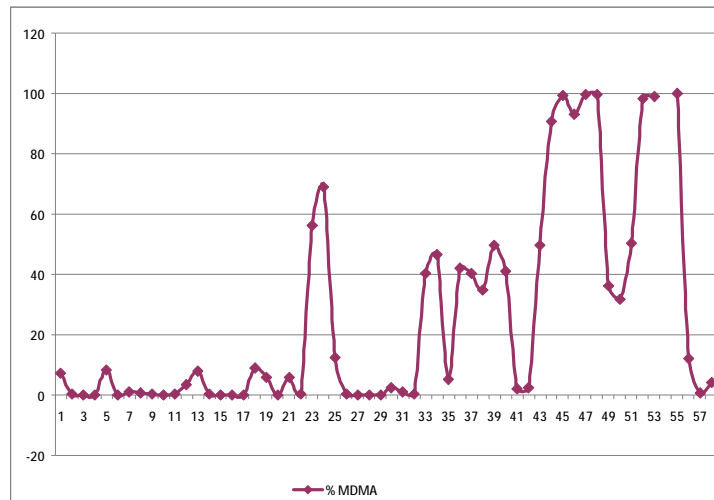
MINISTERIO
DEL INTERIOR Y DE JUSTICIA

MDMA CONCENTRATION

- From 330 samples; 58 contain MDMA in a concentration of 25% in average.
- 7 Samples have higher concentration of MDMA 90%.
- 1 Sample has a concentration of 100% MDMA.
- 12 Samples have a concentration between 15% and 50%
- 35 Samples have a concentration between 0,1% and 15%
- 3 Samples have a concentration between 50 % and 70%.



(MDMA) CONCENTRATION IN 58 SAMPLES

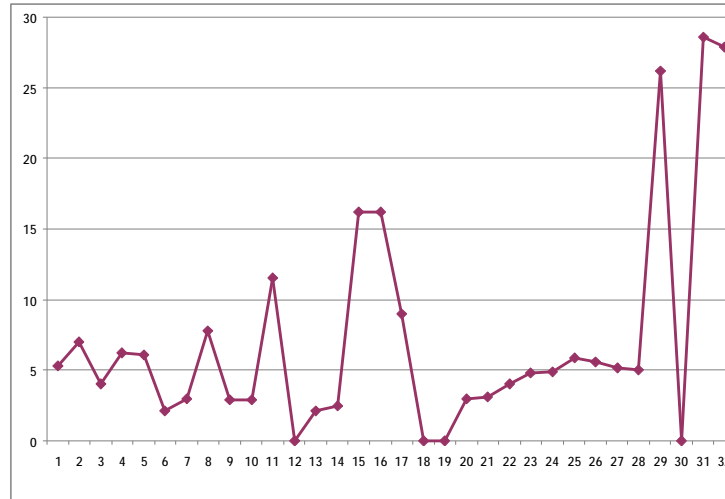


METHAMPHETAMINE

- From 330 samples, in 31 there was found Methamphetamine concentrations.
- 31 samples are equivalent to 10,3 of the sample universe.
- The highest concentration of Methamphetamine was 28,6
- 15,2 is the concentration average of Methamphetamine in 32 samples.



METHAMPHETAMINE TABLET PERCENTAGE (10,3)



LSD

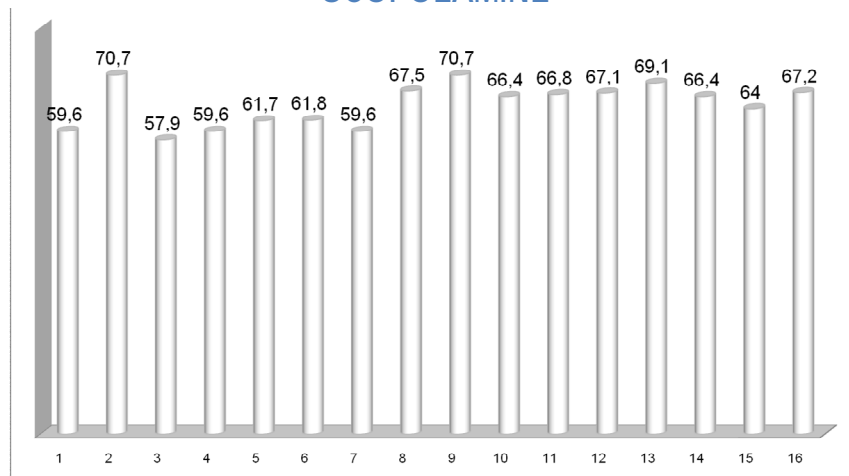
- In 5 of 330 samples, there were found concentrations of LSD
- 5 samples are equivalent to the 1,5 of the established universe in the sampling.
- The highest concentration of LSD was 17,2.
- 9,4 it is the average of LSD concentration in 5 samples.



- The scopolamine appears as active principle in 16 samples and has an approximate participation of 50% in all the cases.
- Majority of the samples that contains scopolamine are commercialized by the name of "Memphis" or "Little angels".

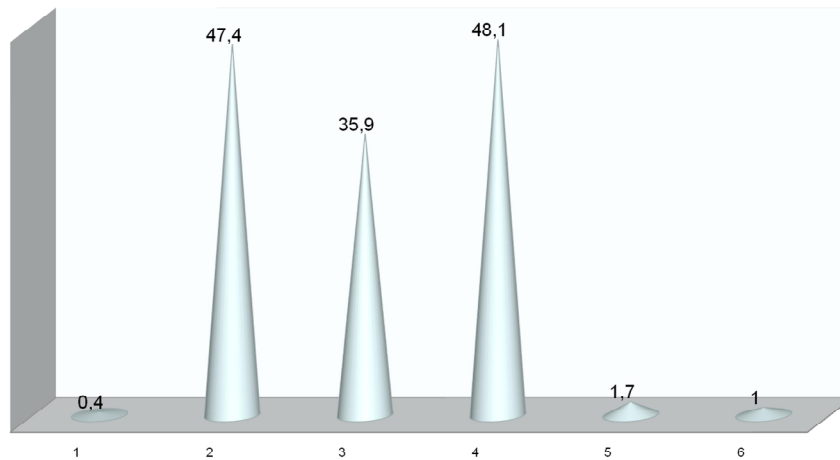


ACTIVE PRINCIPLE PERCENTAGE OF SCOPOLAMINE





ACTIVE PRINCIPLE PERCENTAGE OF KETAMINE



- LSD was found in 45% of the total of trips (11) gathered.
- The concentration of LSD as active principle (active ingredient) it does not overcome 17% of all the cases.



There were found interesting mixtures like:



Methamphetamine	5,8%
Phentermine	6,2%
Caffeine	71,8%
SILDENAFIL -Viagra	19,1%

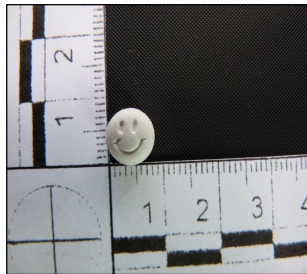
Mixed: Stimulant
Anorexigen
Stimulant
Vasodilator



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA



4-Methoxy methamphetamine	87,1%
MDA	7,3 %
N-Ethyl-4-methoxy- a-metilfenetilamina (PMEA)	2,4 %



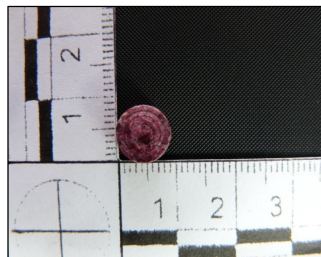
Mixed: Stimulant



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA



4-Metoxi methamphetamine	0,3%
MDMA	0,4%
Caffeine	46,3%
Benadryl	0,6%
Levamisole (product of decomposition of ranitidine)	1,0% 0,7%
Cocaine	2,0%
Carbamazepine	39,1%

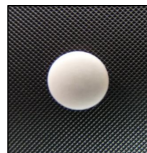
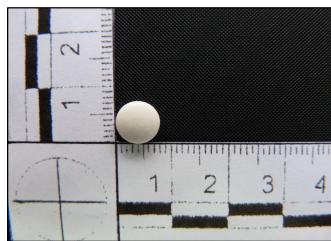


Mixed: Stimulant
Antihistamine
Dewormer
Anticonvulsive



Ketamine	48,1%
Caffeine	20,9%
Levamisole	37,7%

Mixed: Anesthetic
Stimulant
Dewormer



Caffeine	1,4%
Methyl Scopolamine Bromide	5,7%
Scopolamine - H ₂ O	3,4%
Scopolamine	67,5%
Scopolamine acetat	11,0%

Mixed: Stimulant
Antispasmodic and
tranquilizer



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA



MDMA	8,3%
Caffeine	5,4%
Ketamine	35,9%
Xylazine	12,4%
Levamisole	15,3%

Mixed:

Stimulant
Analgesic
Sedative, muscle relaxant and analgesic
Dewormer



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA



Acetaminophen	3,1%
Caffeine	44,1%
Cocaine	0,2%
Chlorcyclizine	0,2%
Monoacetylmorphine	0,7%
Diacetylmorphine	1,6%
Hydroxyzine	47,7%
Johimbe	1,2%

Mixed:

Analgesic
Stimulant
Tranquilizer
Anxiolytic



Dirección Nacional de Estupefacientes
República de Colombia



MINISTERIO
DEL INTERIOR Y DE JUSTICIA

Thank you

Héctor Hernando Bernal Contreras

CHEMIST - BIOTECHNOLOGIST - MSc
FITOTECHNOLOGY

hbernal@dne.gov.co