

FACT SHEET

A selection of internet-based information

3-amino-1-phenyl-butane

Scientific Institute of Public Health
Drugs and Illegal Substances
Program
National Focal Point on Drugs

Juliette Wytsmanstreet 14
1050 Brussels | Belgium

ews.drugs@wiv-isp.be



Epidemiology | December 2011 | Brussels, Belgium

Trudy Van der Linden, MSc.



The information in this message is exclusively meant for the EWS-network, and was sent to you, as a member of this network, in a confidential way. Therefore the information in this message may not be copied, transferred or made public without the prior permission of the WIV-ISP. The WIV-ISP takes responsibility for the editing of a press release, if considered as necessary in the framework of its mission.

A. General information

*Recent **collected sample** in Belgium*

Substance: 3-amino-1-phenyl-butane

Date of collection: 14/11/11

Date of analysis: 24/11/11

Product type: Powder

Color: white

Shape:

Weight

Diameter:

Thickness:

Logo:

Location: Antwerp

Pictures

From EMCDDA's reporting file

Substance: 3-amino-1-phenyl-butane

Created

December 2011

Updated

December 2011

Type

Psychotropic substances

Group

Others

Name

3-amino-1-phenyl-butane

Nature of substance

3-Amino-1-phenyl-butane is structurally related to amphetamine, although it does not strictly belong to the phenethylamine chemical family.

It is likely to exhibit sympathomimetic activity but at a lower potency as compared to amphetamine (active at higher dose).

It is a metabolite and a precursor of Labetalol, a alpha/beta adrenergic antagonist which is used to treat high blood pressure and angina pectoris, and whose teratogenicity has been studied in animals. It is also a doping metabolite.

Systematic chemical name

3-amino-1-phenyl-butane

Other names

Homoamphetamine; 1-phenyl-3-amino-butan; 4-phenylbutan-2-amine; α -Methyl phenethylamine; α -Methylbenzenepropanamine; α -Methyl- γ -phenyl-n-propylamin

Alerts

No Alerts

Reports to EMCDDA

Belgium (Reporting Form): On 12 December 2011 the NFP reported a collected sample of white powder. The experienced user thought to have bought speed, but got some side effects after taking a regular dose. This lead him to give a sample to Free Clinic to have it analysed, on 14/11/2011. The person got a tight feeling on his chest and difficulties breathing. In the sample no methamphetamine, amphetamine or MDMA were found.

Poland (Other): In June 2009 the NFP informed that alpha-methylbenzenepropanamine has been identified by their Forensics.

United Kingdom (Other): On 12 December 2011 Dr Les King informed that: "A single example (1-phenyl-3-butanamine, also known as homoamphetamine) has been encountered where the amino group is more distant from the phenyl group." This single case arose in London some time around 1995, but certainly before the Joint Action started in 1997 and was therefore never mentioned to EMCDDA. (Drug Abuse Trends (Forensic Science Service), No. 111, page 14 (January-March 1996) (see annex)

Information from international partners

Information from EMEA

.

Information from other partners / institutions / countries

.

Assessment status in the UN system

.

Uses & Risks

Modes and scope of the established or expected use

.

Health risks

Pharmacology: In phenylalkylamines, for optimum activity, the N-atom needs to be separated from the phenyl ring by two carbon atoms; in 3-amino-1-phenyl-butane, the amino group is more distant (three carbon atoms) from the phenyl group. Although some studies suggest that 1-phenyl-3-butanamine is inactive as a stimulant upon intraperitoneal administration to mice [van der Schoot et al, 1962; Biel and Bopp, 1978], according to other papers [Barger and Dale 1910/11, Fellows and Bernheim, 1950], the substance is likely to exhibit sympathomimetic activity but at a lower potency as compared to amphetamine (active at higher dose).

Social risks

.

Other uses

.

B. Pictures

Not available

C. Experiences of users

The experienced user thought to have bought speed, but got some side effects after taking a regular dose. This led him to give a sample to be analysed. The person got a tight feeling on his chest and difficulties breathing.

D. Legal status

From EMCDDA

No information

Belgium

Not controlled

E. References

Hudson et al. Comprehensive screening of banned substances from riders by enzyme-linked immunosorbent mass spectrometry and gas chromatography. Poster <http://www.racingsw.com.au/site/content/document/00000510-source.pdf>

Noggle Jr.F. T. et al., Liquid Chromatographic and Mass Spectral Analysis of 1-Phenyl-2-Butanamines: Homologues of the Amphetamines, Journal of Liquid Chromatography Volume 14, Issue 7, 1991

Fellows E. J. and Bernheim F., The Effect of a Number of Aralkylamines on the Oxidation of Tyramine by Amine Oxidase, JPET September 1950 vol. 100 no. 1 94-99

F. Chemistry

Other chemical names and variants

.

Chemical Abstracts Service (CAS) registry number
22374-89-6

Molecular information

Molecular structure:

Molecular formula: C₁₀H₁₅N

Molecular weight: 149.23

Synthesis, manufacture and precursors

The synthesis of Labetolol involves homoamphetamine as one of the key precursors (N-alkylation with the properly substituted alpha-bromoketone).

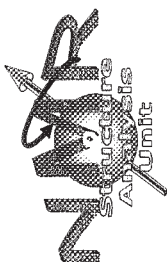
Physical description

Identification and analytical profile

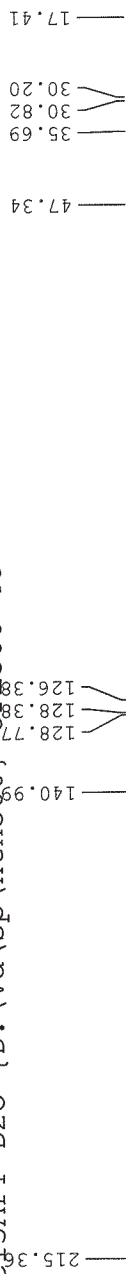
.

- [c13spectrum.pdf](#)

Another NMR spectrum kindly provided by the Belgium NFP



mdb2 xtn300
C:\3APT D2O {D:\vd\sp\xtn300} OPE300 43



NAME mdb
EXPNO 2
PROCNO 1
Date_ 20111201
Time 23.11
INSTRUM spect
PROBHD 5 mm PABBO BB-
PULPROG jmod
TD 65536
SOLVENT D2O
NS 6144
DS 4
SWH 17985.611 Hz
FIDRES 0.274439 Hz
AQ 1.8219508 sec
RG 16384
DW 27.800 usec
DE 6.50 usec
TE 298.0 K
CNST2 145.000000
CNST11 1.000000
D1 2.0000000 sec
D20 0.00689655 sec
TD0 1

==== CHANNEL f1 =====
NUC1 13C
P1 6.00 usec
P2 12.00 usec
PL1 -6.00 dB
PL1W 150.0000000 W
SFO1 75.4752953 MHz

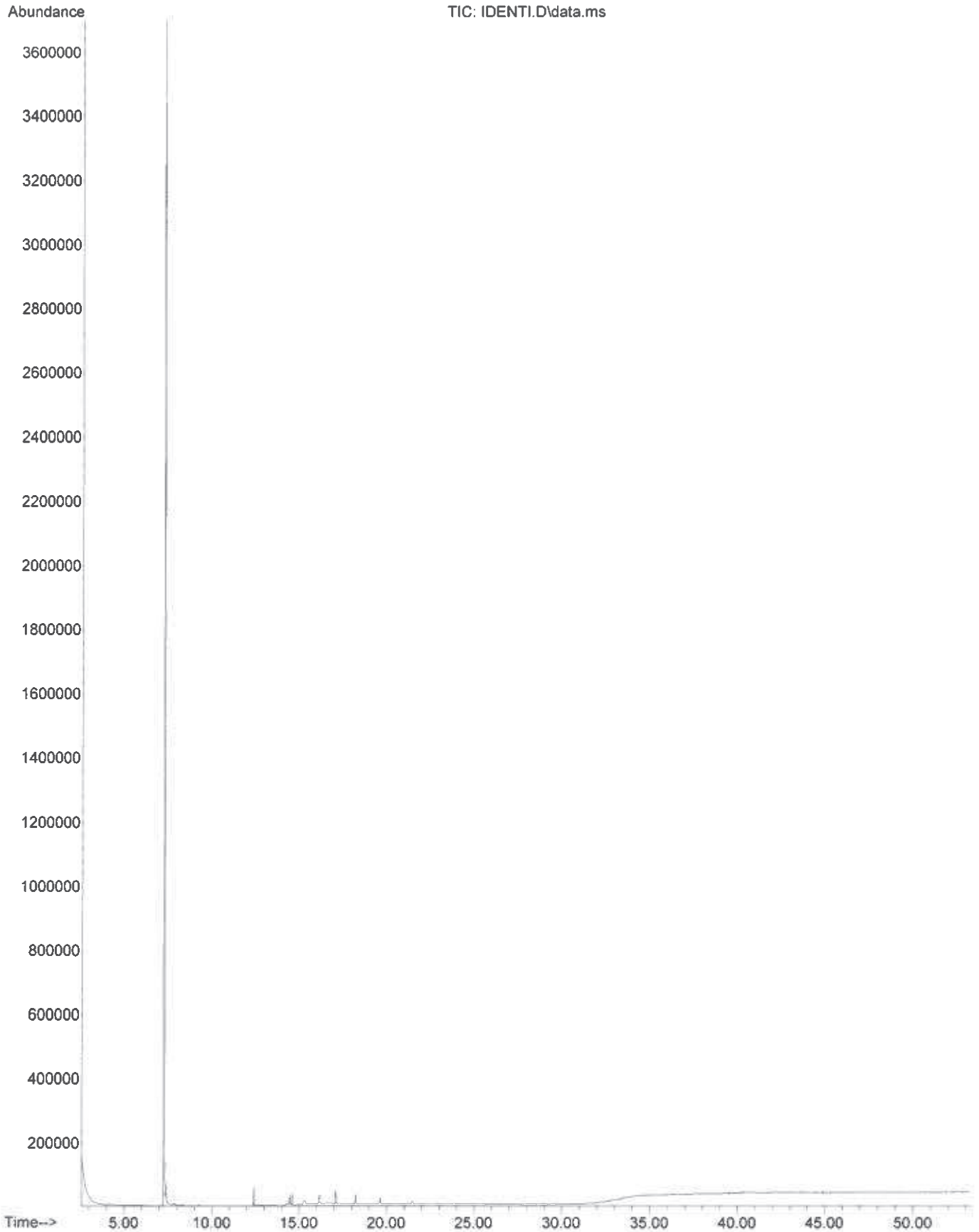
==== CHANNEL f2 =====
CPDPRG2 waltz16
NUC2 1H
PCPD2 80.00 usec
PL2 -4.00 dB
PL12 17.01 dB
PL2W 37.8574095 W
PL12W 0.30002069 W
SFO2 300.1312005 MHz
SI 32768
SF 75.4677490 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.40

200 180 160 140 120 100 80 60 40 20 0 ppm

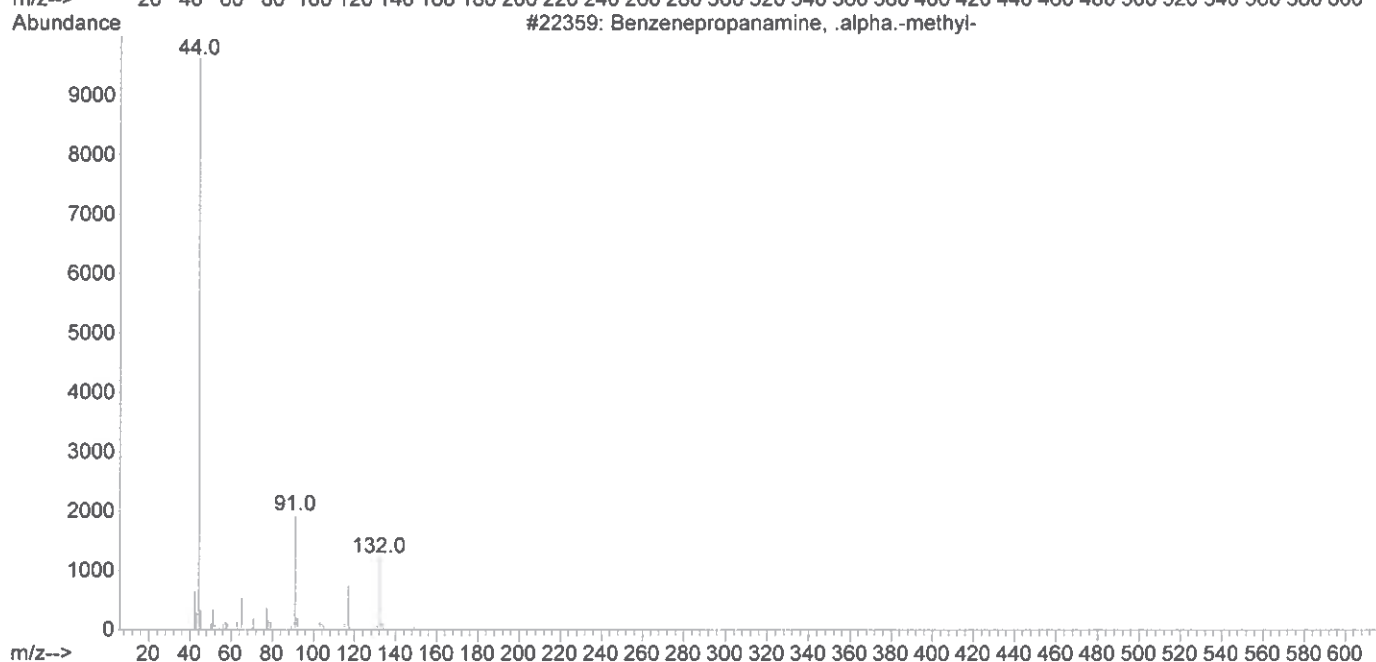
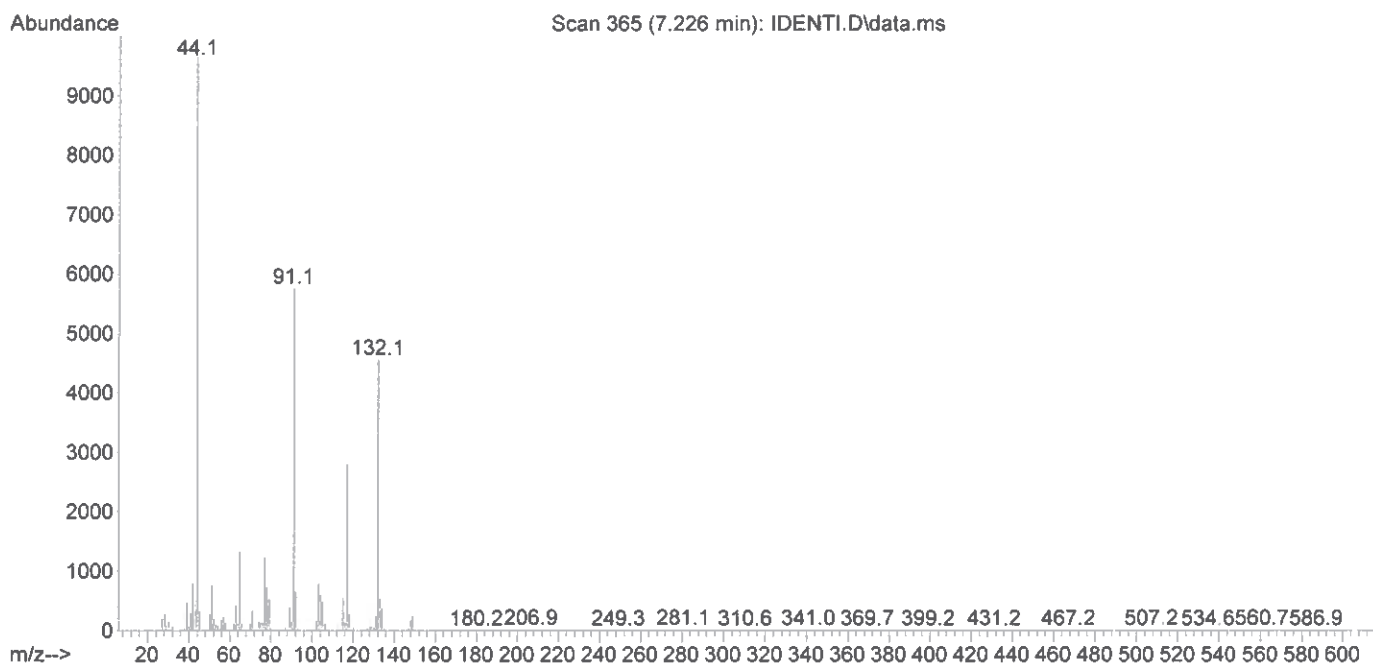
- [GCMSspectrum.pdf](#)

GCMS spectrum kindly provided by the Belgium NFP

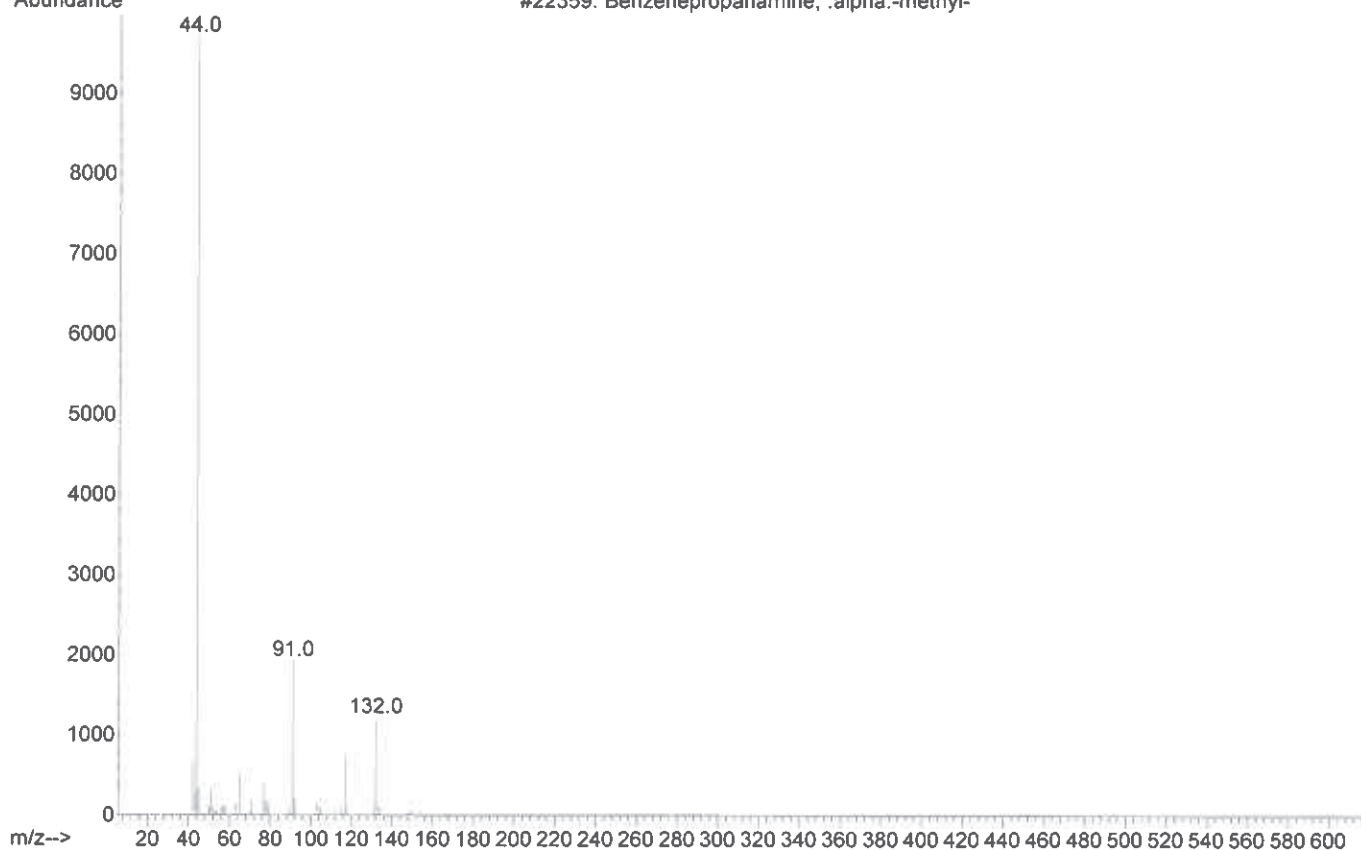
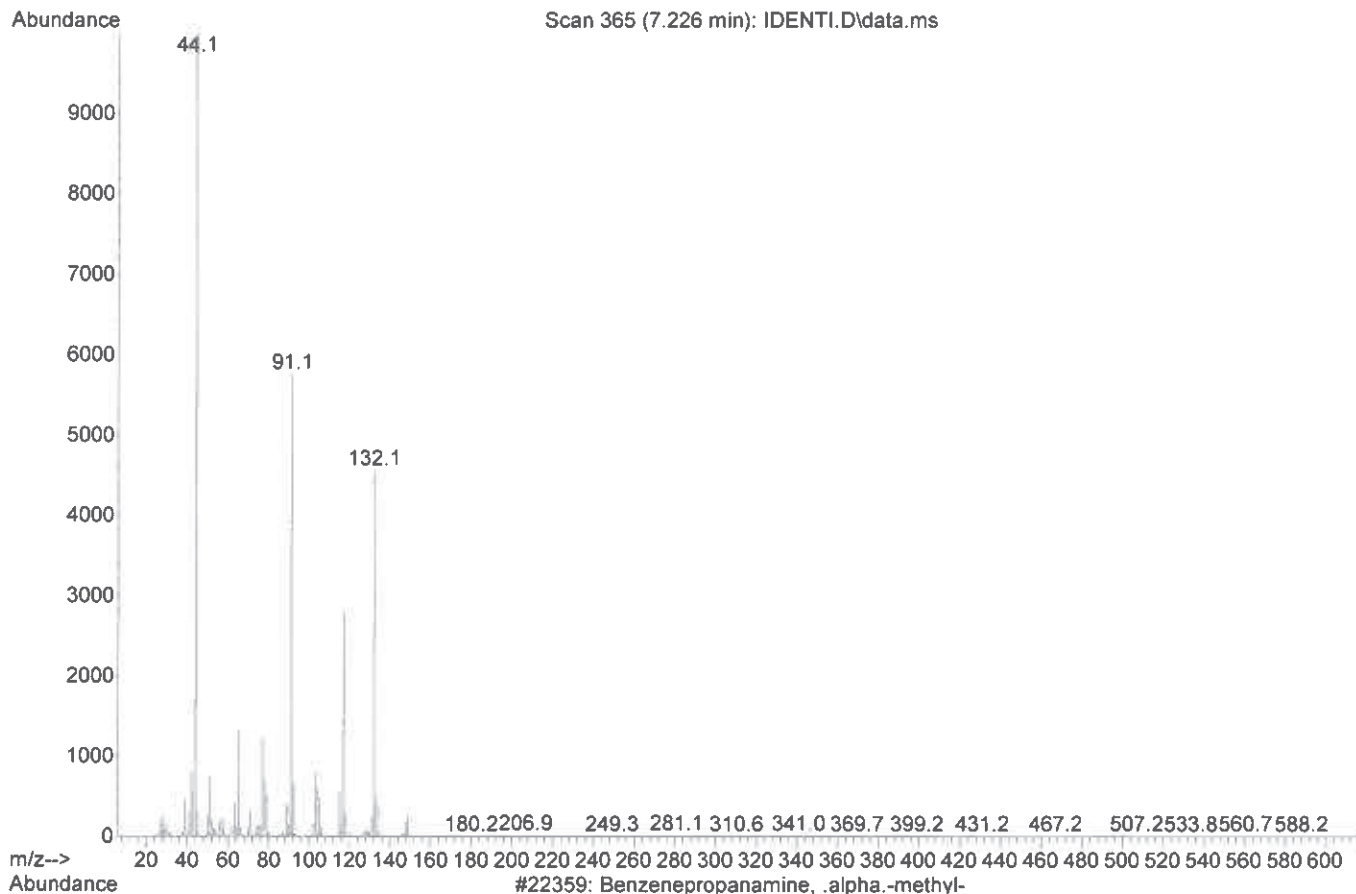
File :C:\msdchem\1\DATA\2011\vad003\IDENTI.D
Operator :
Acquired : 21 Nov 2011 9:52 using AcqMethod screedr.M
Instrument : GC1
Sample Name:
Misc Info :
Vial Number: 25



Library Searched : C:\Database\NIST02.L
Quality : 93
ID : Benzenepropanamine, .alpha.-methyl-



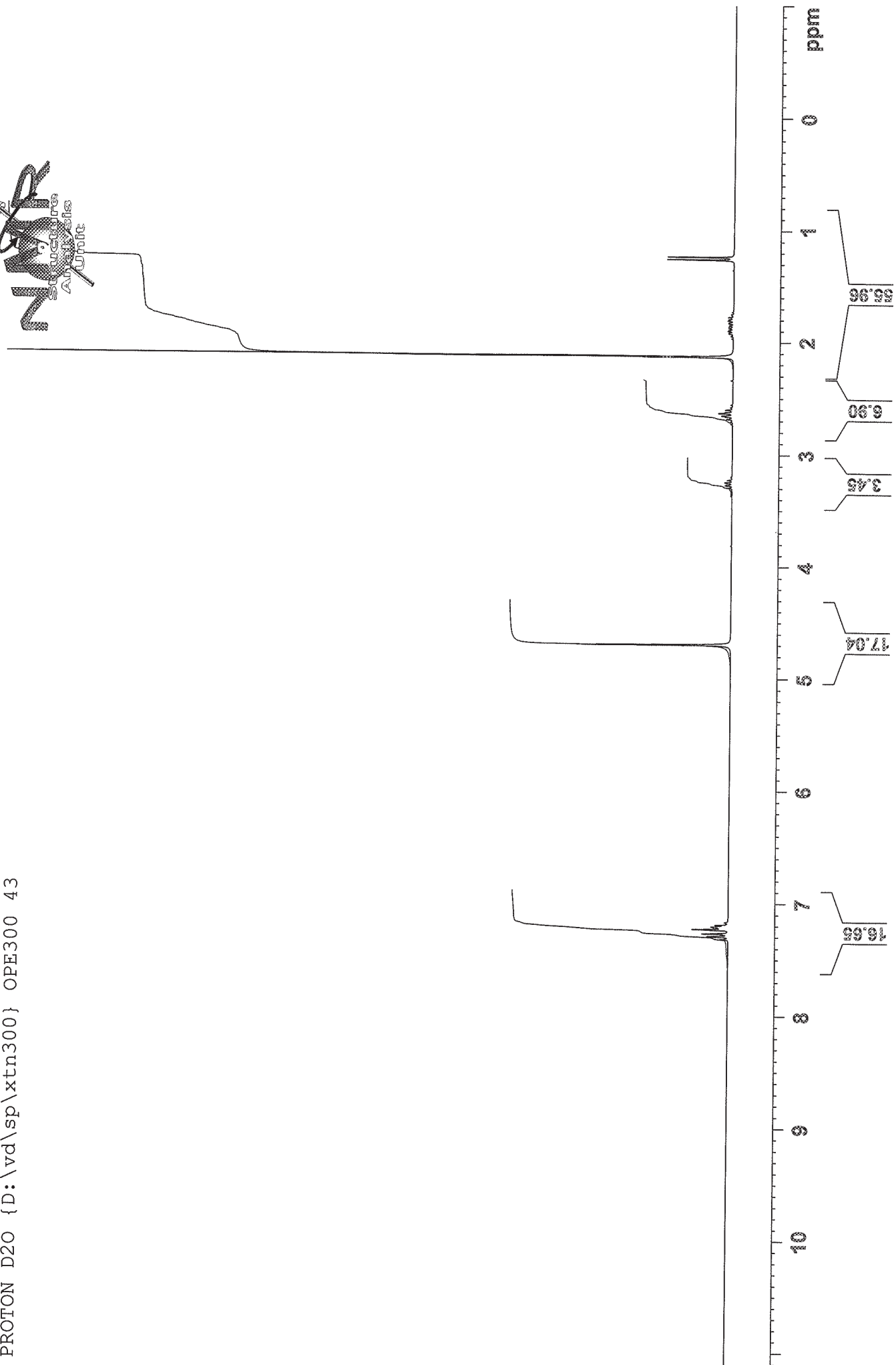
File :C:\msdchem\1\DATA\2011\vad003\IDENTI.D
Operator :
Acquired : 21 Nov 2011 9:52 using AcqMethod screedr.M
Instrument : GC1
Sample Name:
Misc Info :
Vial Number: 25



- [protonspectrum.pdf](#)

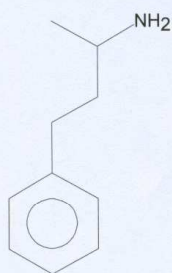
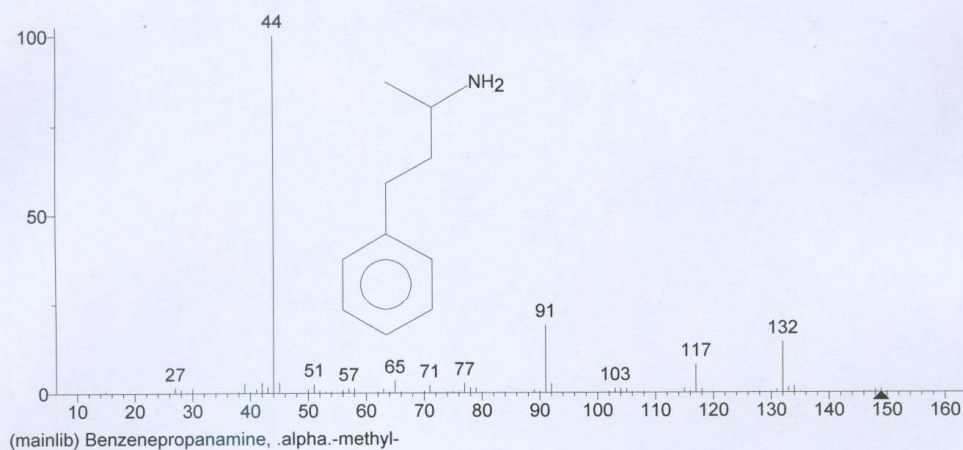
NMR spectrum kindly provided by the Belgian NFP

mdb1 xtn300
PROTON D2O {D:\vd\sp\xtn300} OPE300 43



• [Widmo.JPG](#)

Kindly provided by the Polish NFP



Name: Benzenepropanamine, .alpha.-methyl-
 Formula: C₁₀H₁₅N
 MW: 149 CAS#: 22374-89-6 NIST#: 236590 ID#: 13463 DB: mainlib
 Other DBs: None
 Contributor: Japan AIST/NIMC Database- Spectrum MS-NW-6644
 Synonyms:
 1.3-Amino-1-phenylbutane
 2..alpha.-Methylbenzenepropanamine
 3.1-Methyl-3-phenylpropylamine
 4.1-Phenyl-3-aminobutane
 5.4-Phenyl-2-aminobutane
 6.Propylamine, 1-methyl-3-phenyl-
 7.3-Phenyl-1-methylpropylamine
 8.Propylamine, .alpha.-methyl-.gamma.-phenyl-
 9.1-Phenyl-3-amino-butan
 10..alpha.-Methyl-.gamma.-phenyl-n-propylamin
 11..alpha.-Methyl-.gamma.-phenyl-N-propylamine

PHARMACEUTICAL AND OTHER DRUGS

- (a) Almost 100,000 tablets containing ketamine, ephedrine and procaine were seized in Shropshire. Apart from 'bird impressions', several new forms were present including white and purple heart-shaped tablets as well as round white tablets bearing an impression variously described as a stylised '?' or a tornado.

As noted previously, some illicit ketamine tablets have been found to contain selegiline, a drug normally used (as ELDEPRYL) in the treatment of Parkinsonism. Although selegiline is a metabolic precursor of both amphetamine and methylamphetamine, it is possible that it has been added to illicit tablets because of its properties as a monoamine oxidase inhibitor. In this capacity, selegiline could reduce the metabolic destruction of ketamine and other drugs.

- (b) Further cases of 4-bromo-2,5-dimethoxyphenethylamine (2C-B, NEXUS) have appeared. Powders containing 2C-B mixed with amphetamine were found in paper wraps marked "Happ-E-Daze" and "Pure - Take with water, one dose". Each wrap typically contained 100mg of powder of which the 2C-B comprised approximately 10mg.
- (c) A report in the British Medical Journal (1995; 311: 1502) has claimed that some clients at a drug treatment centre were misusing the antidepressant drug dothiepin to produce euphoria and visual and auditory hallucinations. In 1995, dothiepin was found in ten seizures reported to DIL.
- (d) In February, the Wetherby Laboratory reported the first case in the UK involving methcathinone (ephedrone). The exhibit consisted of twelve wraps of off-white powder with a total weight of 16.7g. Methcathinone is expected to be listed under the Misuse of Drugs Act as a Class B controlled drug.
- (e) Reports from Germany have described abortive clandestine attempts to manufacture 2,5-dimethoxy-4-(n)-propylthiophenethylamine (2C-T-7), other 4-alkylthiophenethylamines, and 4-allyloxy-3,5-dimethoxyphenethylamine. These drugs are structurally related to 2C-B (see above) and are believed to have similar potencies and hallucinogenic effects.
- (f) Although not reported in the UK, the Drug Enforcement Administration in the USA has described the abuse of tablets containing ephedrine and up to 200mg dextromethorphan. The latter substance is normally used as a cough suppressant in doses of 10mg, but large amounts are believed to exert ketamine-like effects.
- (g) A further case involving 1-phenyl-3-butanamine (homoamphetamine) was reported by the Chorley Laboratory in the form of a tablet marked with a bird impression, and also containing caffeine.
- (h) The Aldermaston Laboratory received white tablets bearing a bird impression containing only calcium sulphate (Plaster of Paris). The Metropolitan Police Laboratory reported ACTIFED tablets (a proprietary antihistamine preparation) marked with a \$ (dollar) impression.
- (i) There have been several enquiries, often with a S. African connection, for export of the methaqualone precursor, isatoic anhydride. This substance is a non-restricted alternative to the internationally-controlled N-acetylanthranilic acid.