



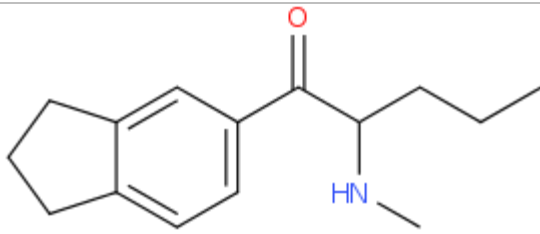
## ANALYTICAL REPORT

### 3',4'-Trimethylenepentedrone (C<sub>15</sub>H<sub>21</sub>NO)

#### 1-(2,3-dihydro-1H-inden-5-yl)-2-(methylamino)pentan-1-one

Remark – other active cpd. detected: **none**

Sample ID:	1680-16
Sample description:	powder - white
Sample type:	RM-reference material
Comments <sup>1</sup> :	CAY Lot#0475378;
Date of entry:	10/10/2016

Substance identified-structure <sup>2</sup> (base form)	
Systematic name:	1-(2,3-dihydro-1H-inden-5-yl)-2-(methylamino)pentan-1-one
Other names:	3',4'-trimethylene-.alpha.-methylamino-Valerophenone; Indanylpentedrone
Formula (per base form)	C <sub>15</sub> H <sub>21</sub> NO
M <sub>w</sub> (g/mol)	231,34
Salt form:	HCl
StdInChIKey	ZCTUUSNQUQRDL-UHFFFAOYSA-N
Compound Class	Cathinones
Other active cpd. detected	none
Add.info (purity..)	98 %

<sup>1</sup> This report has been produced with the financial support of the Prevention of and fight against crime Programme of the European Union (grant agreement number JUST/2013/ISEC/DRUGS/AG/6426). The contents of this report are the sole responsibility of the National Forensic Laboratory and can in no way be taken to reflect the views of the European Commission.

<sup>2</sup> Created by OPSIN free tool: <http://opsin.ch.cam.ac.uk/> DOI: 10.1021/ci100384d

## Report updates

date	comments (explanation)

## Supporting information

Analytical technique:	applied	remarks
GC-MS (EI ionization)	+	NFL GC-RT (min): 6,49 BP(1): 86; BP(2): 115,BP(3) :87,
FTIR-ATR	+	
GC-IR (condensed phase)	+	

**1. GC-MS** (Agilent): GC-method is RT locked to tetracosane (9.258 min). Injection volume 1 ml and split mode (1:50). Injector temperature: 280 °C. Chromatographic separation: on column HP1-MS (100% dimethylpolysiloxane), length 30 m, internal diameter 0.25 mm, film thickness 0.25 µm. Carrier gas He: flow-rate 1.2 ml/min. GC oven program: 170 °C for 1 min, followed by heating up to 190 °C at rate 8 °C/min, then heating up to 293 °C at a rate of 18 °C/min, hold for 6.1 min, then heating at 50 °C/min up to 325 °C and finally 6.1 min isothermal. MSD source EI = 70 eV. GC-MS transfer line T= 235 °C, source and quadrupole temperatures 280 °C and 180 °C, respectively. Scan range m/z scan range: from 50 (30 until 6 min.) to 550 (300 until 6 min) amu.

**2. FTIR-ATR** (Perkin Elmer): scan range 4000-400 cm<sup>-1</sup>; resolution 4cm<sup>-1</sup>

**3. GC- (MS)-IR** condensed phase (GC-MS (Agilent) & IR (Spectra analyses-Danny)

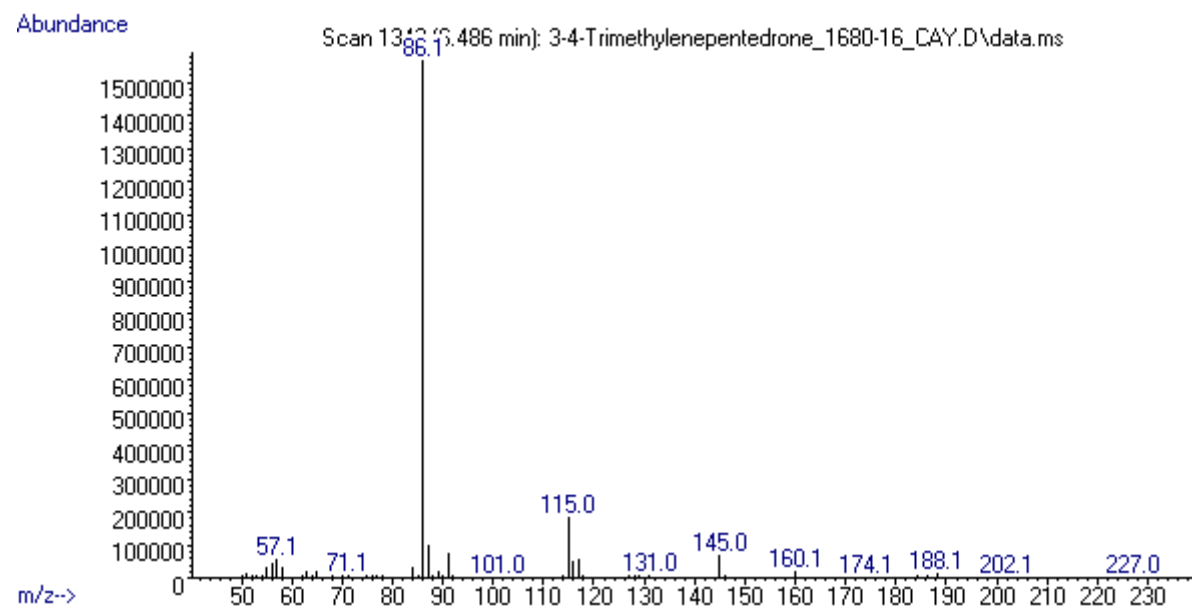
GC-method: Injection volume 1 ml and split mode (1:5). Injector temperature 280 °C. Chromatographic separation as above **(1)**. Split MS : IR = 1 : 9.

MSD source EI = 70 eV. GC-MS transfer line T= 235 °C, source and quadrupole temperatures 280 °C and 180 °C, respectively. Scan range m/z scan range: from 50 (30 until 6 min.) to 550 (300) amu.

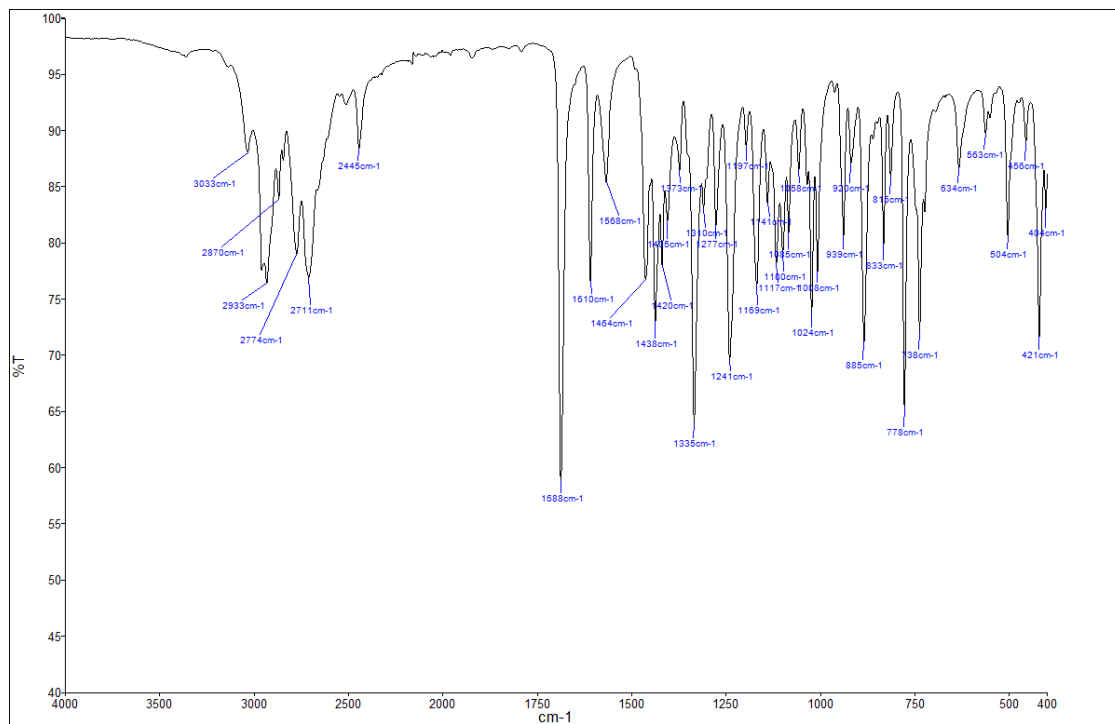
IR (condensed (solid) phase): IR scan range 4000 to 650, resolution 4 cm<sup>-1</sup>.

# FIGURES OF SPECTRA

MS (EI)

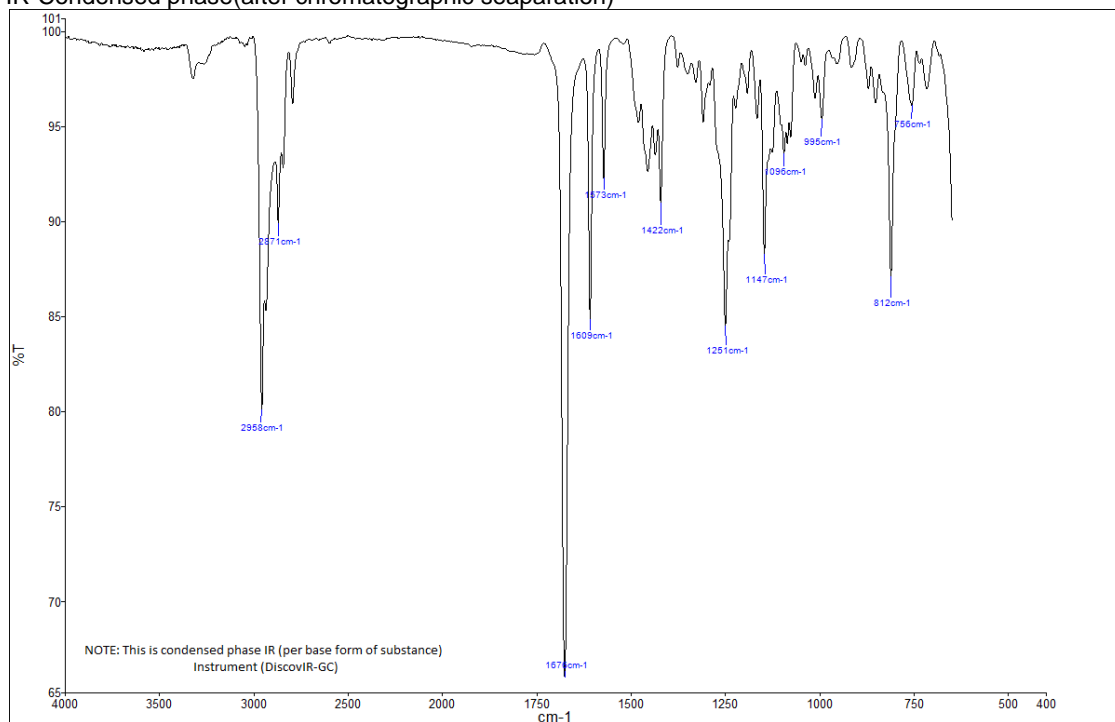


# FTIR-ATR



Name	Description
3-4-Trimethylenepentredone-HCl_1680-16_CAV_IR-A	ID:1680-16; 1-(2,3-dihydro-1H-inden-5-yl)-2-(methylamino)pentan-1-one-HCl_Lot#0475378

# IR-Condensed phase(after chromatographic separation)



Name	Description
3-4-Trimethylenepentredone-HCl_1680-16_Cay_IR-C.spc	Sample_ID:1680-16; 1-(2,3-dihydro-1H-inden-5-yl)-2-(methylamino)pentan-1-one-HCl_Lot#0475378