

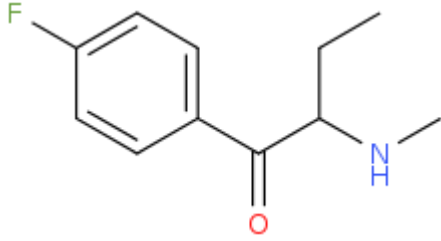
ANALYTICAL REPORT

4-fluorobuphedrone (C₁₁H₁₄FNO)

1-(4-fluorophenyl)-2-(methylamino)butan-1-one

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

| | |
|-------------------------|--|
| Sample ID: | 1615-16 |
| Sample description: | powder - white |
| Sample type: | RM-reference material |
| Comments ¹ : | CAY Lot#0454960-11; RESPONSE -purchasing |
| Date of entry: | 7/19/2016 |

| | |
|---|--|
| Substance identified-structure ² (base form) |  |
| Systematic name: | 1-(4-fluorophenyl)-2-(methylamino)butan-1-one |
| Other names: | 4-FBP, 4-F-MABP |
| Formula (per base form) | C ₁₁ H ₁₄ FNO |
| M _w (g/mol) | 195.24 |
| Salt form: | HCl |
| StdInChIKey | NEZHKHMZNSFKGS-UHFFFAOYSA-N |
| Compound Class | Cathinones |
| Other active cpd. detected | none |
| Add.info (purity..) | 98% |

¹ 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/6413). 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.

² 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): 3.13 BP(1): 72; BP(2): 95, BP(3) :57, |
| FTIR-ATR | + | direct measurement |
| GC-IR (condensed phase) | + | always as base form |

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⁻¹; resolution 4cm⁻¹

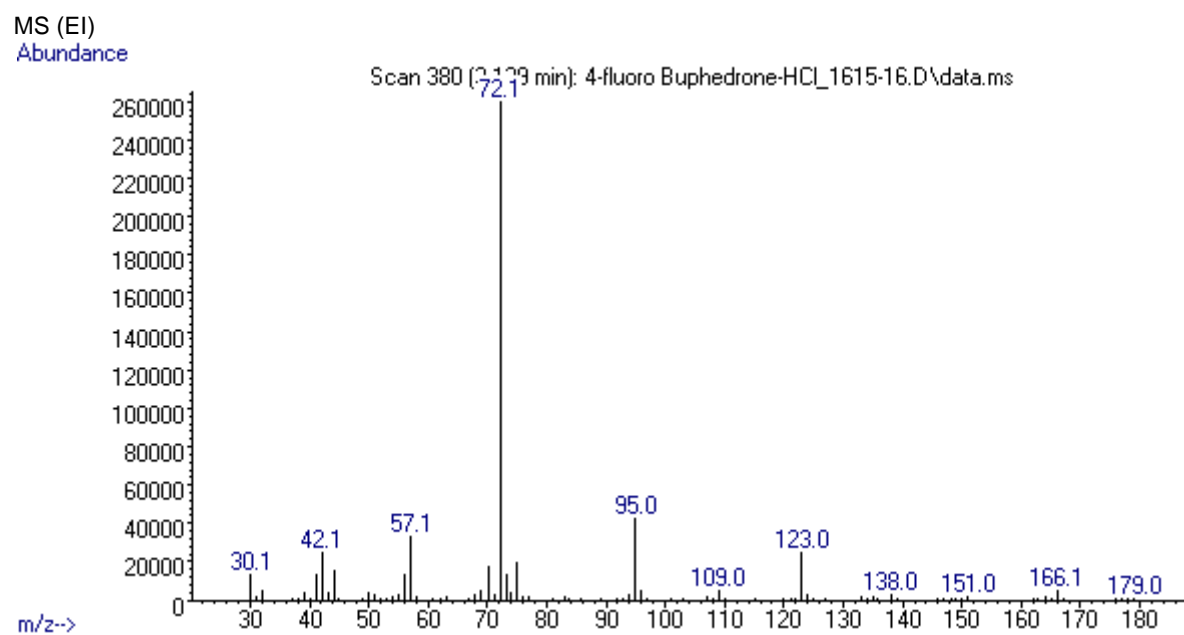
3. GC- (MS)-IR condensed phase (GC-MS (Agilent) & IR (Spectra analyses-Danny)

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.

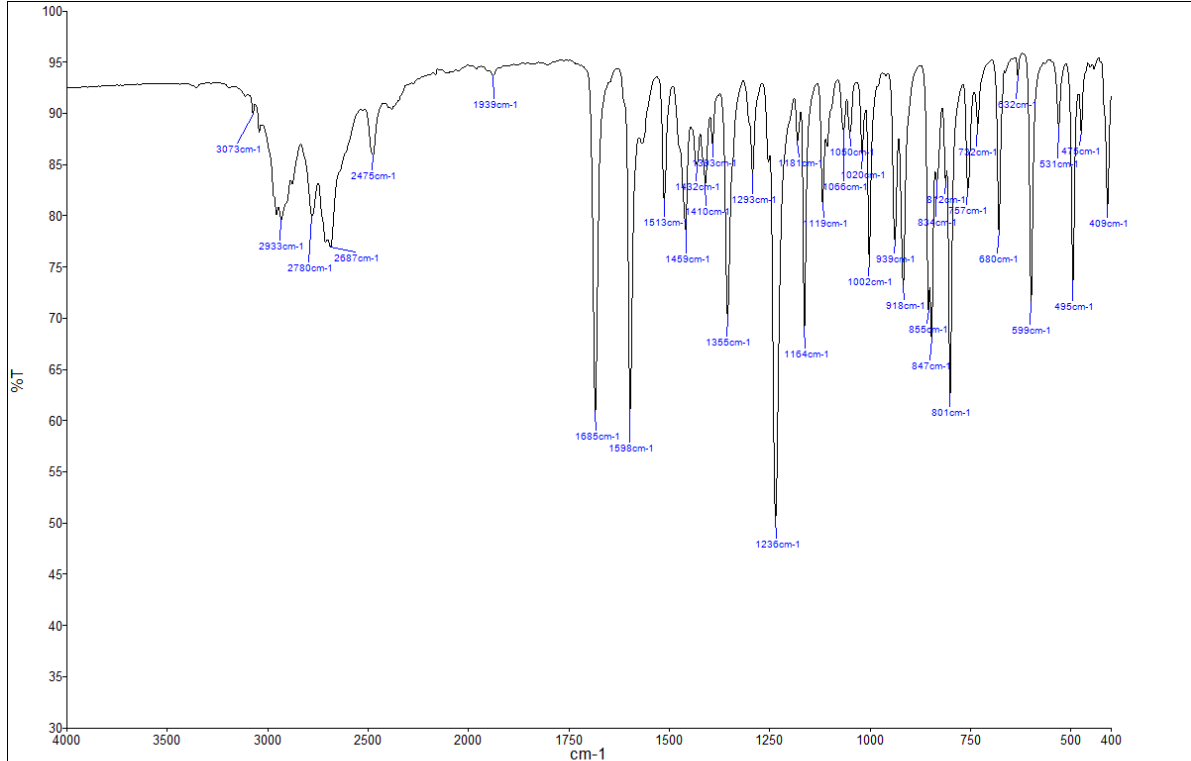
MSD source EI = 70 eV. GC-MS transfer line T= 235 °C, source and quadrupole temperatures 280 °C and 180 °C, respectively. Scan range m/z scan range: from 50 (30 until 6 min.) to 550 (300) amu.

IR (condensed (solid) phase): IR scan range 4000 to 650, resolution 4 cm⁻¹.

FIGURES OF SPECTRA

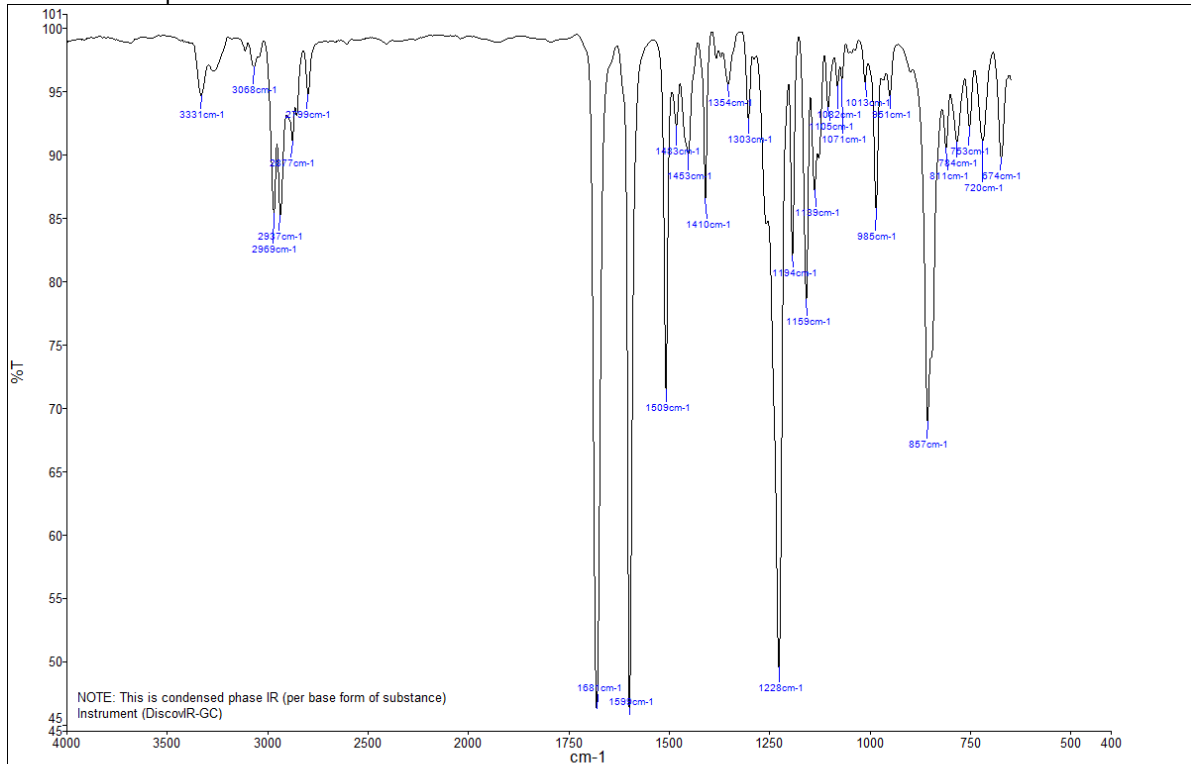


FTIR-ATR



| Name | Description |
|---|--|
| 4-fluorobuphedrone-HCl_1615-16_CAV_IR-A | ID:1615-16; 1-(4-fluorophenyl)-2-(methylamino)butan-1-one-HCl_Lot#0454960-11 |

IR-Condensed phase



NOTE: This is condensed phase IR (per base form of substance)
Instrument (DiscovIR-GC)

| Name | Description |
|---|---|
| 4-fluorobuphedrone-HCl_1615-16_CAV_IR-C.spc | Sample_ID:1615-16; 1-(4-fluorophenyl)-2-(methylamino)butan-1-one-HCl_Lot#0454960-11 |