ANALYTICAL REPORT

Mephedrone (C11H15NO)

(RS)-2-Methylamino-1-(4-methylphenyl)propan-1-one

Remark – other active cpd. detected: none

<table>
<thead>
<tr>
<th>Sample ID:</th>
<th>1000-12A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample description:</td>
<td>powder - white</td>
</tr>
<tr>
<td>Sample type:</td>
<td>RM-reference material</td>
</tr>
<tr>
<td>Comments:</td>
<td>Fluka Lot#BCBF2682V;</td>
</tr>
<tr>
<td>Date of entry:</td>
<td>2/2/2012</td>
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</tbody>
</table>

Substance identified-structure\(^1\) (base form)

![Structure](image)

Systematic name: (RS)-2-Methylamino-1-(4-methylphenyl)propan-1-one

Other names: 4-methylmethcathinone (4-MMC)

Formula (per base form) C11H15NO

\(M_w\) (g/mol) 177.24

Salt form: HCl

StdInChIKey YELGFTGWJGAQU-UHFFFAOYSA-N

Compound Class Cathinones

Other active cpd. detected none

Add.info (purity..) 99.90%

\(^1\) Created by OPSIN free tool: [http://opsin.ch.cam.ac.uk/](http://opsin.ch.cam.ac.uk/) DOI: 10.1021/ci100384d
Report updates

<table>
<thead>
<tr>
<th>date</th>
<th>comments (explanation)</th>
</tr>
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<tbody>
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Supporting information

Analytical technique: applied remarks

<table>
<thead>
<tr>
<th></th>
<th>applied</th>
<th>remarks</th>
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</thead>
<tbody>
<tr>
<td>GC-MS (EI ionization)</td>
<td>+</td>
<td>NFL GC-RT (min): 3,52 BP(1): 58; BP(2): 91,BP(3) :32,</td>
</tr>
<tr>
<td>FTIR-ATR</td>
<td>+</td>
<td>direct measurement</td>
</tr>
<tr>
<td>GC-IR (condensed phase)</td>
<td>/</td>
<td></td>
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</tbody>
</table>

**GC-MS** (Agilent):
GC-method is RT locked to tetracosane (RT=9.53 min).
Injection volume 1 ml and split mode (1:50).
Injector temperature: 280 °C.
Chromatographic separation
Column: HP1-MS (100% dimethylpolysiloxane), length 30 m, internal diameter 0.25 mm, film thickens 0.25 mm.
Carrier gas He: flow-rate 1.2 ml/min. GC oven program: 170 °C for 1 min, followed by heating up to 293 °C at a rate of 18 °C/min, hold for 6.1 min, than heating at 50 °C/min up to 325 °C and finally 2.8 min isothermal.
MSD source EI = 70 eV. GC-MS transfer line T= 235°C, source and quadropole temperatures 280°C and 180°C, respectively. Scan range m/z scan range: from 50 (40) to 550 amu.

**FTIR-ATR** (Perkin Elmer): scan range 4000-400 cm-1; resolution 4cm-1

**GC- (MS)-IR** condensed phase (GC-MS (Agilent) & IR (Spectra analyses-Danny) IR scan range 4000 to 700, resolution 4cm-1
GC-method:
Injection volume 1 ml and split mode (1:5).
Injector temperature: 280 °C.
Chromatographic separation
Column: HP1-MS (100% dimethylpolysiloxane), length 30 m, internal diameter 0.25 mm, film thickens 0.25 mm.
Carrier gas He: flow-rate 1.2 ml/min. GC oven program: 170 °C for 1 min, followed by heating up to 293 °C at a rate of 18 °C/min, hold for 6.1 min, than heating at 50 °C/min up to 325 °C and finally 2.8 min isothermal.
Split MS : IR : (1:9)
MSD source EI = 70 eV. GC-MS transfer line T= 235°C, source and quadropole temperatures 280°C and 180°C, respectively. Scan range m/z scan range: from 50 (40) to 550 amu.
IR (condensed phase): IR scan range 4000 to 700, resolution 4cm-1
FIGURES OF SPECTRA

MS (EI)

Abundance

FTIR-ATR

Stran 3 od 3

ID 1000-12A