



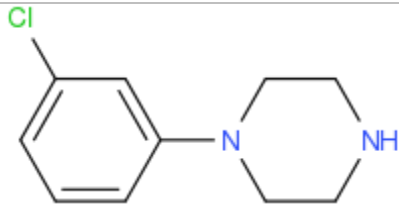
ANALYTICAL REPORT

mCPP (C₁₀H₁₃ClN₂)

1-(3-chlorophenyl)piperazine

Remark – other NPS detected: **none**

Sample ID:	962-10A
Sample description:	powder - white
Sample type:	RM-reference material
Comments:	Lipomed Lot#970.1B1.1
Date of entry:	11/18/2010

Substance identified-structure ⁱ (base form)	
Systematic name	1-(3-chlorophenyl)piperazine
Other names	
Formula (per base form)	C ₁₀ H ₁₃ ClN ₂
M _w (g/mol)	196,67
Salt form	HCl
Smiles	ClC=1C=C(C=CC1)N1CCNCC1
Compound Class	Piperazine derivates
Other NPS detected	none
Add.info (purity..)	99,99%

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Supporting information

Analytical technique:	applied	remarks
GC-MS (EI ionization)	+	NFL GC-RT (min): 5,38 BP(1): 154; BP(2): 196,BP(3) :138,
FTIR-ATR	+	

GC-MS (Agilent): GC-method is RT locked to tetracosane (RT=9.53 min). Injection volume 1 ml and split mode (1:50) for GC-MS instruments and 1:5 for GC-MS-FTIR (condensed phase). Injector temperature: 280 °C. Column: HP1-MS (100% dimethylpolysiloxane), length 30 m, internal diameter 0.25 mm, film thickness 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, then 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 quadrupole temperatures 280 °C and 180 °C. m/z scan range: from 50 (40) to 550 amu.

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

Abundance

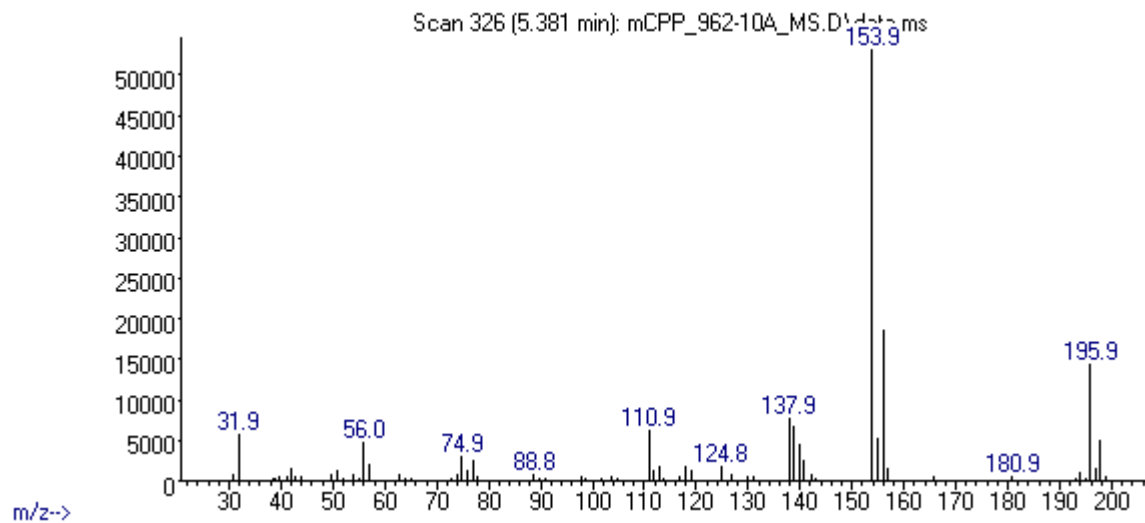


Figure 1: GC-MS spectrum

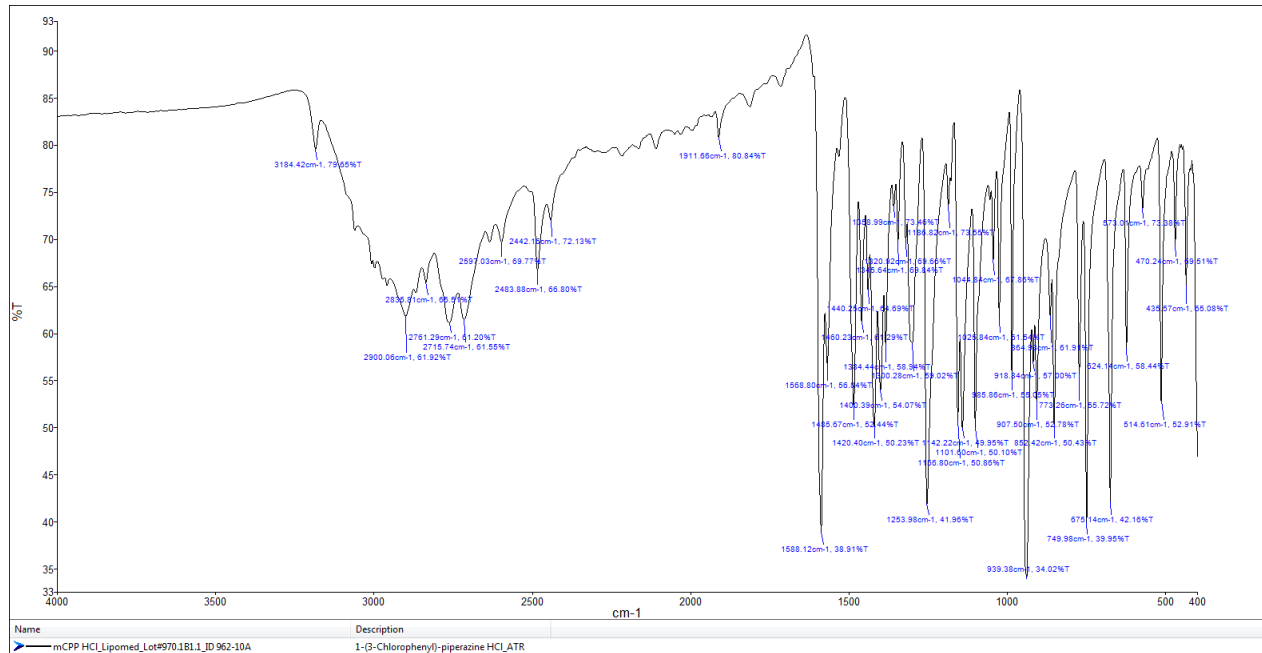


Figure 2: FTIR ATR

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