



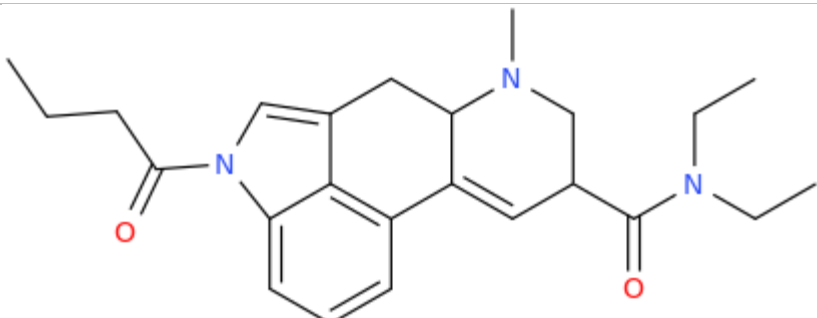
ANALYTICAL REPORT

1B-LSD (C₂₄H₃₁N₃O₂)

11-butanoyl-N,N-diethyl-6-methyl-6,11-diazatetracyclo[7.6.1.02,7.012,16]hexadeca-1(15),2,9,12(16),13-pentaene-4-carboxamide

Remark – other NPS detected:

Sample ID:	2064-19
Sample description:	blotter
Sample type:	test purchase /NFL- purchasing
Date of sample receipt (DD/MM/YYYY):	43584
Date of entry (DD/MM/YYYY) into NFL database:	21/05/2019
Report updates (if any) will be published here:	http://www.policija.si/apps/nfl_response_web/seznam.php

Substance identified - structure ¹ (base form)	
Systematic name	11-butanoyl-N,N-diethyl-6-methyl-6,11-diazatetracyclo[7.6.1.02,7.012,16]hexadeca-1(15),2,9,12(16),13-pentaene-4-carboxamide
Other names	4-Butyryl-N,N-diethyl-7-methyl-4,6,6a,7,8,9-hexahydroindolo[4,3-fg]quinoline-9-carboxamide; 1-Butyryl-LSD; 1-Butanoyl-lysergic acid diethylamide; LSD BUT
Formula (per base form)	C ₂₄ H ₃₁ N ₃ O ₂
M _w (g/mol)	393,53
Salt form/anions detected	base
StdInChIKey (per base form)	SVRFNPSJPIDUBC-UHFFFAOYSA-N
Other NPS detected	
Additional info (purity..)	Simon D Brandt et al: Return of the lysergamides. Part V: Analytical and behavioural characterization of 1-butanoyl-d-lysergic acid diethylamide (1B-LSD); https://onlinelibrary.wiley.com/doi/abs/10.1002/dta.2613

¹ Created by OPSIN free tool: <http://opsin.ch.cam.ac.uk/> DOI: 10.1021/ci100384d

Report updates

date	comments (explanation)

Instrumental methods (if applied) in NFL

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 7.1 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 quadropole 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. HPLC-TOF (Agilent): 6230B TOF with Agilent 1260 Infinity HPLC with binary pump, column: Zorbax Eclipse XDB-C18, 50 x 4.6 mm, 1.8 micron. Mobile phases (A) 0.1% formic acid and 1mM ammonium formate in water; (B) 0.1% formic acid in methanol (B). Gradient: starting at 5% B, changing to 40% B over 4 min, then to 70% over 2 min and in 5 min to 100%, hold 1 min and back to 5%, equilibration for 1.7 min. The flow rate: 1.0 ml/min; Injection volume 1 µl. MS parameters: 2GHz, Extended Dynamic range mode to a maximum of 1700 amu, acquisition rate 1.30 spectra/sec. Sample ionisation: by Agilent Jet Stream technology (Dual AJS ESI). Ion source: positive ion scan mode with mass scanning from 82 to 1000 amu. Other TOF parameters: drying gas (N₂) and sheath temperature 325 °C; drying gas flow rate 6 l/min; sheath gas flow rate 8 l/min; nebulizer 25 psig; Vcap. 4000 V; nozzle 2000 V; skimmer 65 V; fragmentor 175 V and Octopole RF 750 V.

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

4. 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 quadropole 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.

5. IC (anions) (Thermo Scientific, Dionex ICS 2100), Column: IonPac AS19, 2 x 250mm; Eluent: 10mM KOH from 0 to 10 min, 10-58 mM from 10 to 40min; Flow rate: 0.25 ml/min; Temperature: 30°C; Suppressor: AERS 500 2mm, suppressor current 13mA; Inj. Volume: 25 µl

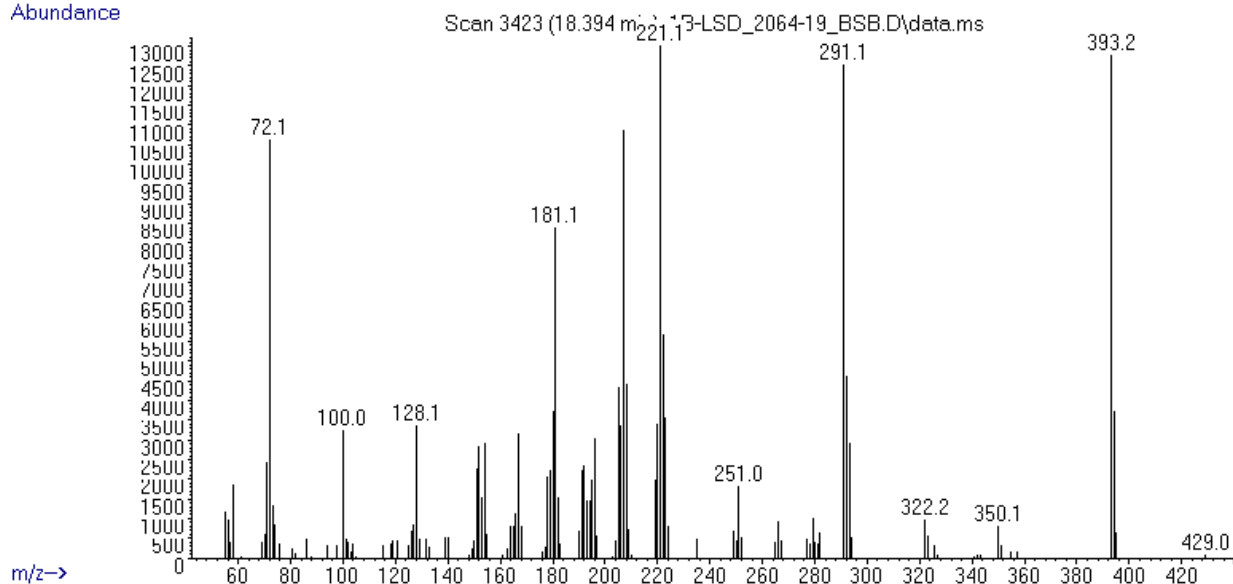
Supporting information

Analytical technique:	applied	remarks
GC-MS (EI ionization)	+	NFL GC-RT (min): 18,39 BP(1): 221; BP(2): 393,BP(3) :291,
HPLC-TOF	+	Exact mass (theoretical): 393,2416; measured value Δ ppm:-0,36; formula:C24H31N3O2
FTIR-ATR	-	direct measurement (sample as received)
FTIR (solid phase) always as base form	+	
IC (anions)	-	
NMR (in FKKT)	-	
validation		
other		

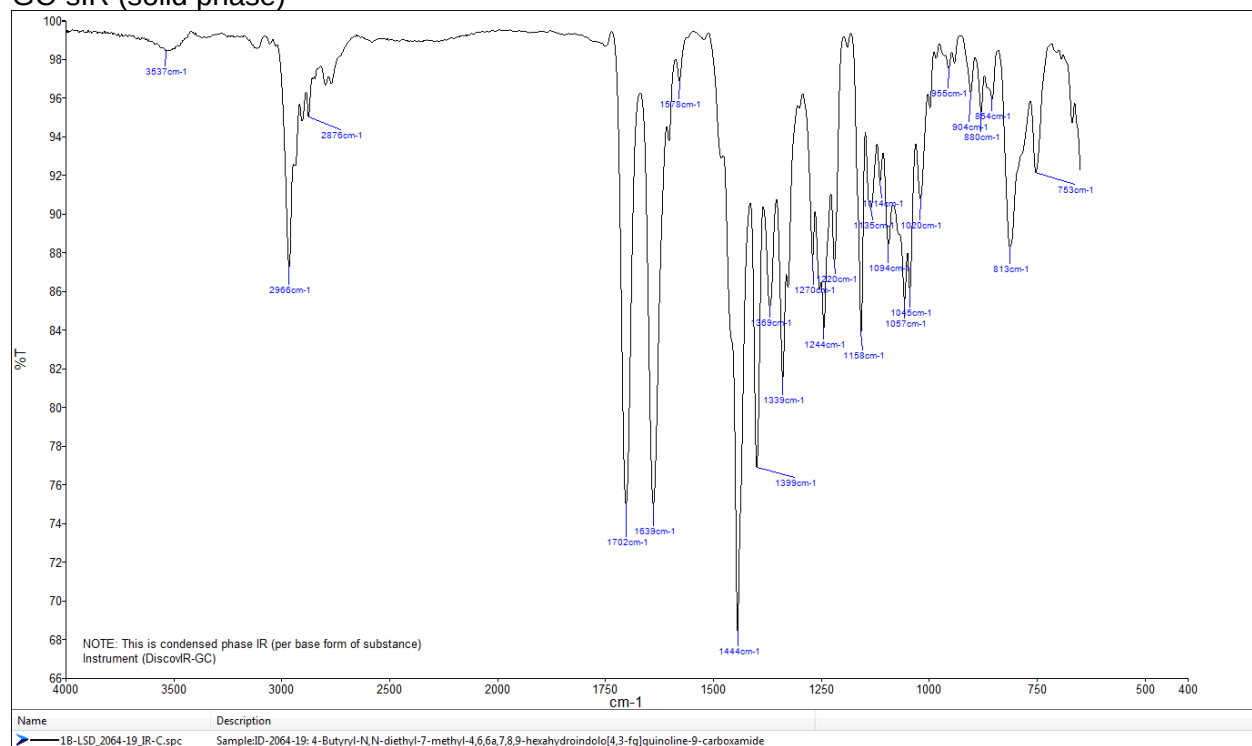
ANALYTICAL RESULTS

MS (EI)

Abundance



GC-sIR (solid phase)



Name	Description
18-LSD_2064-19_IR-C.spc	SampleID: 2064-19: 4-Butyryl-N,N-diethyl-7-methyl-4,5,6a,7,8,9-hexahydroindolo[4,3-fg]quinoline-9-carboxamide