



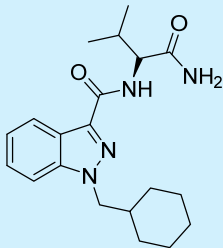
SYNTHETIC CANNABINOIDS

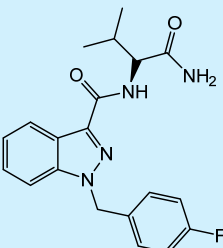
Synthetic cannabinoids are cannabinoid receptor agonists showing CB1 and CB2 binding affinities, resulting in producing cannabis-like effects.

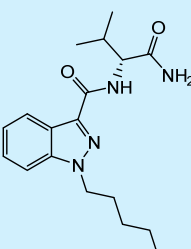
These compounds have become very popular as «legal high» smoking mixtures, among which the brand name «Spice» is the most well-known. Due to the fast expanding «Spice»-phenomenon, control measures have been implemented in many countries to make «Spice» compounds illegal.

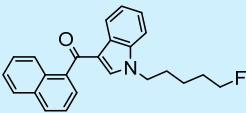
Nevertheless, the huge number of potentially psychoactive synthetic cannabinoids (for ex. JWH-, CP-, HU-, WIN-, RCS-, AM-compounds) presents an ongoing challenge for the forensic and toxicological identification.

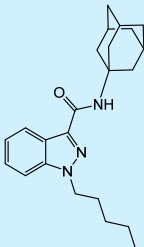
LIPOMED currently supplies a first range of synthetic cannabinoids and metabolites available as ready-to-use calibrated solution and/or as standard pack sizes of 10 mg, 50 mg and 100 mg. For more information, please check our website www.lipomed-shop.com.

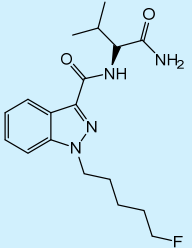
	AB-CHMINACA		
	Molecular Formula	$C_{20}H_{28}N_4O_2$	CAS Number 1185887-21-1
	Molecular Weight	356.47	DEA Number 7031 CI
	AB-1741-0.1LA	0.1 mg/1 ml	calibrated solution in acetonitrile
	AB-1741-1LA	1.0 mg/1 ml	calibrated solution in acetonitrile
	AB-1741-10	10 mg	powder
	AB-1741-50	50 mg	powder
	AB-1741-100	100 mg	powder

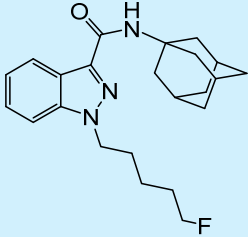
	AB-FUBINACA		
	Molecular Formula	$C_{20}H_{21}FN_4O_2$	CAS Number 1185282-01-2
	Molecular Weight	368.41	DEA Number 7012 CI
	FUB-1621-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	FUB-1621-1LM	1.0 mg/1 ml	calibrated solution in methanol
	FUB-1621-10	10 mg	powder
	FUB-1621-50	50 mg	powder
	FUB-1621-100	100 mg	powder

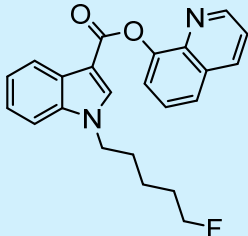
	AB-PINACA		
	Molecular Formula	$C_{18}H_{26}N_4O_2$	CAS Number 1445752-09-9
	Molecular Weight	330.43	DEA Number 7023 CI
	ABP-1624-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	ABP-1624-1LM	1.0 mg/1 ml	calibrated solution in methanol
	ABP-1624-10	10 mg	powder
	ABP-1624-50	50 mg	powder
	ABP-1624-100	100 mg	powder

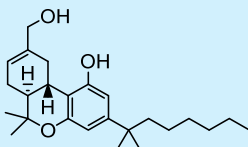
	AM-2201		
	Molecular Formula	$C_{24}H_{22}FNO$	CAS Number 335161-24-5
	Molecular Weight	359.44	DEA Number 7201 CI
	JWH-1503-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1503-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1503-10	10 mg	powder
	JWH-1503-50	50 mg	powder
	JWH-1503-100	100 mg	powder

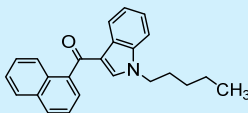
	APINACA		
	Synonym(s): AKB-48		
	Molecular Formula	$C_{23}H_{31}N_3O$	CAS Number 1345973-53-6
	Molecular Weight	365.52	DEA Number 7048 CI
	AKB-1631-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	AKB-1631-1LM	1.0 mg/1 ml	calibrated solution in methanol
	AKB-1631-10	10 mg	powder
	AKB-1631-50	50 mg	powder
	AKB-1631-100	100 mg	powder

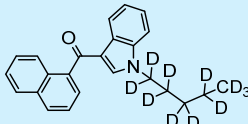
	5F-AB-PINACA		
	Molecular Formula	$C_{18}H_{25}FN_4O_2$	CAS Number 1800101-60-3
	Molecular Weight	348.42	DEA Number 7025 CI
	ABF-1620-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	ABF-1620-1LM	1.0 mg/1 ml	calibrated solution in methanol
	ABF-1620-10	10 mg	powder
	ABF-1620-50	50 mg	powder
	ABF-1620-100	100 mg	powder

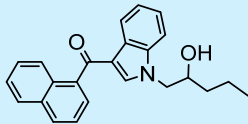
	5F-APINACA		
	Synonym(s): 5F-AKB-48		
	Molecular Formula	$C_{23}H_{30}FN_3O$	CAS Number 1400742-13-3
	Molecular Weight	383.51	DEA Number 7049 CI
	AKB-1910-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	AKB-1910-1LM	1.0 mg/1 ml	calibrated solution in methanol
	AKB-1910-10	10 mg	powder
	AKB-1910-50	50 mg	powder
	AKB-1910-100	100 mg	powder

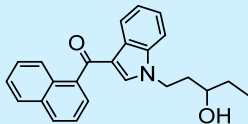
	5F-PB-22		
	Synonym(s): 5-Fluoro-PB-22, 5F-QUPIC		
	Molecular Formula	$C_{23}H_{21}FN_2O_2$	CAS Number 1400742-41-7
	Molecular Weight	376.43	DEA Number 7225 CI
	PBF-1623-0.1LA	0.1 mg/1 ml	calibrated solution in acetonitrile
	PBF-1623-1LA	1.0 mg/1 ml	calibrated solution in acetonitrile
	PBF-1623-10	10 mg	powder
	PBF-1623-50	50 mg	powder
	PBF-1623-100	100 mg	powder

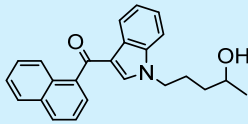
	HU-210		
	Molecular Formula	$C_{25}H_{38}O_2$	CAS Number 112830-95-2
	Molecular Weight	386.58	DEA Number 7370 CI
	HU-1617-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	HU-1617-1LM	1.0 mg/1 ml	calibrated solution in methanol

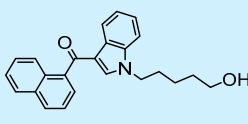
	JWH-018		
	Synonym(s): Naphthalen-1-yl-(1-pentylindol-3-yl)methanone		
	Molecular Formula	$C_{24}H_{23}NO$	CAS Number 209414-07-3
	Molecular Weight	341.45	DEA Number 7118 CI
	JWH-1294-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1294-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1294-10	10 mg	powder
	JWH-1294-50	50 mg	powder
	JWH-1294-100	100 mg	powder

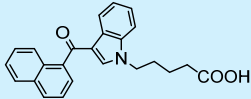
	JWH-018-D₁₁		
	Molecular Formula	C ₂₄ H ₁₂ D ₁₁ NO	CAS Number 7118 CI
	Molecular Weight	352.51	DEA Number
	JWH-1328-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1328-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1328-10	10 mg	powder
	JWH-1328-50	50 mg	powder
	JWH-1328-100	100 mg	powder

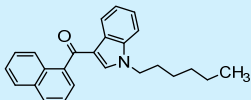
	JWH-018 N-(2-hydroxypentyl) metabolite		
	Molecular Formula	C ₂₄ H ₂₃ NO ₂	CAS Number
	Molecular Weight	357.45	DEA Number
	JWH-1411-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1411-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1411-10	10 mg	powder
	JWH-1411-50	50 mg	powder
	JWH-1411-100	100 mg	powder

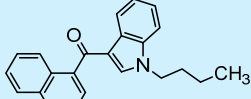
	JWH-018 N-(3-hydroxypentyl) metabolite		
	Molecular Formula	C ₂₄ H ₂₃ NO ₂	CAS Number
	Molecular Weight	357.45	DEA Number
	JWH-1419-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1419-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1419-10	10 mg	powder
	JWH-1419-50	50 mg	powder
	JWH-1419-100	100 mg	powder

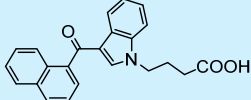
	JWH-018 N-(4-hydroxypentyl) metabolite		
	Molecular Formula	C ₂₄ H ₂₃ NO ₂	CAS Number 1320363-47-0
	Molecular Weight	357.45	DEA Number
	JWH-1426-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1426-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1426-10	10 mg	powder
	JWH-1426-50	50 mg	powder
	JWH-1426-100	100 mg	powder

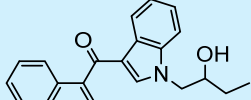
	JWH-018 N-(5-hydroxypentyl) metabolite		
	Molecular Formula	C ₂₄ H ₂₃ NO ₂	CAS Number 335161-21-2
	Molecular Weight	357.45	DEA Number
	JWH-1398-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1398-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1398-10	10 mg	powder
	JWH-1398-50	50 mg	powder
	JWH-1398-100	100 mg	powder

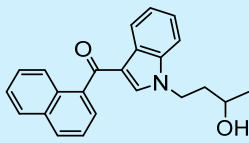
	JWH-018 N-pentanoic acid metabolite		
	Molecular Formula	$C_{24}H_{21}NO_3$	CAS Number 1254475-87-0
	Molecular Weight	371.44	DEA Number
	JWH-1393-0.1LE	0.1 mg/1 ml	calibrated solution in ethanol
	JWH-1393-1LE	1.0 mg/1 ml	calibrated solution in ethanol
	JWH-1393-10	10 mg	powder
	JWH-1393-50	50 mg	powder
	JWH-1393-100	100 mg	powder

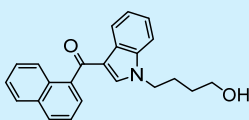
	JWH-019		
	Synonym(s): Naphthalen-1-yl-(1-hexylindol-3-yl)methanone		
	Molecular Formula	$C_{25}H_{25}NO$	CAS Number 209414-08-4
	Molecular Weight	355.48	DEA Number 7019 CI
	JWH-1362-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1362-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1362-10	10 mg	powder
	JWH-1362-50	50 mg	powder
	JWH-1362-100	100 mg	powder

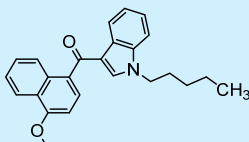
	JWH-073		
	Synonym(s): Naphthalen-1-yl-(1-butylindol-3-yl)methanone		
	Molecular Formula	$C_{23}H_{21}NO$	CAS Number 208987-48-8
	Molecular Weight	327.42	DEA Number 7173 CI
	JWH-1293-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1293-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1293-10	10 mg	powder
	JWH-1293-50	50 mg	powder
	JWH-1293-100	100 mg	powder

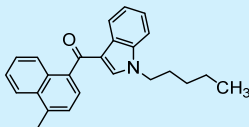
	JWH-073 N-butanoic acid metabolite		
	Molecular Formula	$C_{23}H_{19}NO_3$	CAS Number 1307803-52-6
	Molecular Weight	357.4	DEA Number
	JWH-1370-0.1LE	0.1 mg/1 ml	calibrated solution in ethanol
	JWH-1370-1LE	1.0 mg/1 ml	calibrated solution in ethanol
	JWH-1370-10	10 mg	powder
	JWH-1370-50	50 mg	powder
	JWH-1370-100	100 mg	powder

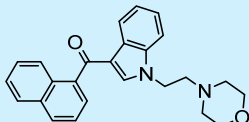
	JWH-073 N-(2-hydroxybutyl) metabolite		
	Molecular Formula	$C_{23}H_{21}NO_2$	CAS Number
	Molecular Weight	343.42	DEA Number
	JWH-1432-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1432-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1432-10	10 mg	powder
	JWH-1432-50	50 mg	powder
	JWH-1432-100	100 mg	powder

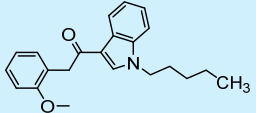
	JWH-073 N-(3-hydroxybutyl) metabolite		
	Molecular Formula	$C_{23}H_{21}NO_2$	CAS Number 1320363-48-1
	Molecular Weight	343.42	DEA Number
	JWH-1443-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1443-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1443-10	10 mg	powder
	JWH-1443-50	50 mg	powder
	JWH-1443-100	100 mg	powder

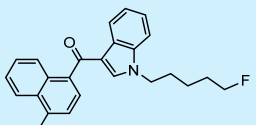
	JWH-073 N-(4-hydroxybutyl) metabolite		
	Molecular Formula	$C_{23}H_{21}NO_2$	CAS Number 335161-14-3
	Molecular Weight	343.42	DEA Number
	JWH-1375-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1375-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1375-10	10 mg	powder
	JWH-1375-50	50 mg	powder
	JWH-1375-100	100 mg	powder

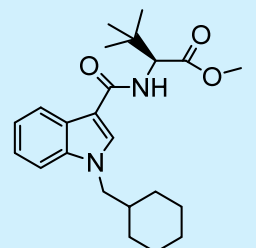
	JWH-081		
	Synonym(s): 4-Methoxynaphthalen-1-yl-(1-pentylindol-3-yl)methanone		
	Molecular Formula	$C_{25}H_{25}NO_2$	CAS Number 210179-46-7
	Molecular Weight	371.48	DEA Number 7081 CI
	JWH-1505-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1505-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1505-10	10 mg	powder
	JWH-1505-50	50 mg	powder
	JWH-1505-100	100 mg	powder

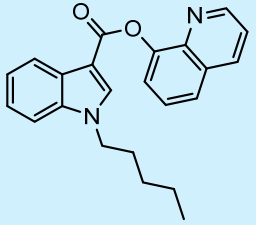
	JWH-122		
	Synonym(s): (4-Methyl-1-naphthyl)-(1-pentylindol-3-yl)methanone		
	Molecular Formula	$C_{25}H_{25}NO$	CAS Number 619294-47-2
	Molecular Weight	355.47	DEA Number 7122 CI
	JWH-1491-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1491-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1491-10	10 mg	powder
	JWH-1491-50	50 mg	powder
	JWH-1491-100	100 mg	powder

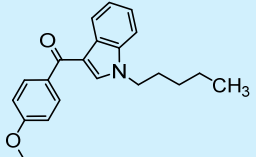
	JWH-200		
	Synonym(s): (1-(2-Morpholin-4-ylethyl)indol-3-yl)-naphthalen-1-ylmethanone		
	Molecular Formula	$C_{25}H_{24}N_2O_2$	CAS Number 103610-04-4
	Molecular Weight	384.47	DEA Number 7200 CI
	JWH-1308-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1308-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1308-10	10 mg	powder
	JWH-1308-50	50 mg	powder
	JWH-1308-100	100 mg	powder

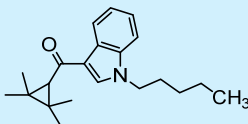
	JWH-250		
	Synonym(s): 2-(2-Methoxyphenyl)-1-(1-pentylindol-3-yl)ethanone		
	Molecular Formula	$C_{22}H_{25}NO_2$	CAS Number 864445-43-2
	Molecular Weight	335.44	DEA Number 6250 CI
	JWH-1356-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	JWH-1356-1LM	1.0 mg/1 ml	calibrated solution in methanol
	JWH-1356-10	10 mg	powder
	JWH-1356-50	50 mg	powder
	JWH-1356-100	100 mg	powder

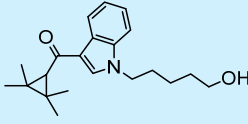
	MAM-2201		
	Synonym(s): 5''-Fluoro-JWH-122		
	Molecular Formula	$C_{25}H_{24}FNO$	CAS Number 1354631-24-5
	Molecular Weight	373.47	DEA Number
	MAM-1739-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	MAM-1739-1LM	1.0 mg/1 ml	calibrated solution in methanol
	MAM-1739-10	10 mg	powder
	MAM-1739-50	50 mg	powder
	MAM-1739-100	100 mg	powder

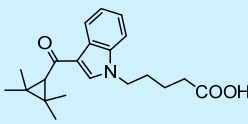
	MDMB-CHMICA		
	Molecular Formula	$C_{22}H_{32}N_2O_3$	CAS Number 1971007-95-0
	Molecular Weight	384.52	DEA Number 7042 CI
	DMB-1845-1LA	1.0 mg/1 ml	calibrated solution in acetonitrile
	DMB-1845-10	10 mg	powder
	DMB-1845-50	50 mg	powder
	DMB-1845-100	100 mg	powder

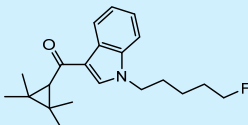
	PB-22		
	Synonym(s): QUPIC		
	Molecular Formula	$C_{23}H_{22}N_2O_2$	CAS Number 1400742-17-7
	Molecular Weight	358.44	DEA Number 7222 CI
	PB-1622-0.1LA	0.1 mg/1 ml	calibrated solution in acetonitrile
	PB-1622-1LA	1.0 mg/1 ml	calibrated solution in acetonitrile
	PB-1622-10	10 mg	powder
	PB-1622-50	50 mg	powder
	PB-1622-100	100 mg	powder

	RCS-4		
	Synonym(s): SR-19		
	Molecular Formula	$C_{21}H_{23}NO_2$	CAS Number 1345966-78-0
	Molecular Weight	321.41	DEA Number 7104 CI
	RCS-1493-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	RCS-1493-1LM	1.0 mg/1 ml	calibrated solution in methanol
	RCS-1493-10	10 mg	powder
	RCS-1493-50	50 mg	powder
	RCS-1493-100	100 mg	powder

	UR-144		
	Synonym(s): (1-Pentylindol-3-yl)-(2,2,3,3-tetramethylcyclopropyl)methanone		
	Molecular Formula	C ₂₁ H ₂₉ NO	CAS Number 1199943-44-6
	Molecular Weight	311.46	DEA Number 7011 CI
	UR-1495-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	UR-1495-1LM	1.0 mg/1 ml	calibrated solution in methanol
	UR-1495-10	10 mg	powder
	UR-1495-50	50 mg	powder
	UR-1495-100	100 mg	powder

	UR-144 N-(5-hydroxypentyl) metabolite		
	Synonym(s): XLR-11 N-(5-hydroxypentyl) metabolite		
	Molecular Formula	C ₂₁ H ₂₉ NO ₂	CAS Number 895155-95-0
	Molecular Weight	327.47	DEA Number
	UR-1577-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	UR-1577-1LM	1.0 mg/1 ml	calibrated solution in methanol
	UR-1577-10	10 mg	powder
	UR-1577-50	50 mg	powder
	UR-1577-100	100 mg	powder

	UR-144 N-pentanoic acid metabolite		
	Synonym(s): XLR-11 N-pentanoic acid metabolite		
	Molecular Formula	C ₂₁ H ₂₇ NO ₃	CAS Number 1451369-33-7
	Molecular Weight	341.45	DEA Number
	UR-1576-0.1LI	0.1 mg/1 ml	calibrated solution in isopropanol
	UR-1576-1LI	1.0 mg/1 ml	calibrated solution in isopropanol
	UR-1576-10	10 mg	powder
	UR-1576-50	50 mg	powder
	UR-1576-100	100 mg	powder

	XLR-11		
	Synonym(s): 5-Fluoro-UR-144		
	Molecular Formula	C ₂₁ H ₂₈ FNO	CAS Number 1364933-54-9
	Molecular Weight	329.46	DEA Number 7011 CI
	XLR-1575-0.1LM	0.1 mg/1 ml	calibrated solution in methanol
	XLR-1575-1LM	1.0 mg/1 ml	calibrated solution in methanol
	XLR-1575-10	10 mg	powder
	XLR-1575-50	50 mg	powder
	XLR-1575-100	100 mg	powder

Bill to	Ship to (if different from invoicing address)
Customer/Company	Customer/Company
Department	Department
Address	Address
Contact Person	Contact Person
City, ZIP	City, ZIP
State, Country	State, Country
Phone	Phone
Fax	Fax
E-Mail Address	E-Mail Address
No of pages (incl. this one)	Customer Account #
Date of Request	Purchase Order
Special instructions/Notes	

[illegible]

9

Ordering & other information

LIPOMED is a private Swiss Health Care Company. We are one of the leading companies for Analytical Reference Standards worldwide and specialized in the research, development and manufacturing of ethical pharmaceuticals and products for the treatment of rare diseases.

Since 1993 LIPOMED is dedicated to providing products and services of outstanding quality and expertise. We have our own GMP/GDP and ISO 9001 certified pharmaceutical production facilities in Arlesheim, near Basel. We are also ISO/IEC 17025 accredited for testing of Analytical Reference Standards and ISO 17034 accredited for the production of Reference Material.

Our innovative products are marketed and distributed with offices and partners in more than 50 countries around the world.

LIPOMED's Analytical Reference Standards currently include the following classes of substances, their deuterated analogues and metabolites, such as Glucuronides and Sulfates:

- | | |
|---|-------------------------|
| » Alcohol & Ethanol Biomarkers | » Cathinones |
| » Amphetamines & Sympathomimetic amines | » Cocaines |
| » Antidepressants | » Custom Mixtures |
| » Antipsychotics | » Hallucinogens |
| » Barbiturates | » Opioids |
| » Benzodiazepines | » Other CNS Depressants |
| » Cannabinoids | » Steroids |

For more information about LIPOMED's Analytical Reference Standards, please visit our website www.lipomed-shop.com.

SWITZERLAND (HEADQUARTERS)

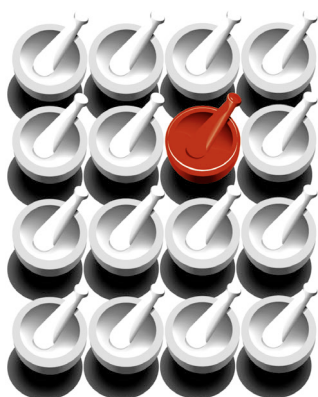
LIPOMED AG
Fabrikmattenweg 4
4144 Arlesheim
Switzerland
Tel +41 61 702 02 00
Fax +41 61 702 02 20
Lipomed.EMEA@lgcgroup.com

GERMANY

LIPOMED GmbH
Hegenheimer Str. 2
79576 Weil am Rhein Germany
Tel +49 7621 1693 473
Fax +49 7621 1693 474
Lipomed.EMEA@lgcgroup.com

USA, CANADA, BERMUDA

LIPOMED Inc
150 Cambridgepark Drive
Cambridge, MA 02140 USA
Tel +1 617 577 7222
Fax +1 617 577 1776
Lipomed.AMER@lgcgroup.com



LIPOMED AG, Switzerland is **GMP/GDP** and **ISO 9001** certified for production and distribution of Pharmaceuticals and **ISO/IEC 17025** (ANAB certificate no. AT-1760) accredited for testing of Analytical Reference Standards and **ISO 17034** (ANAB certificate no. AR-1761) accredited for Reference Material production. All products distributed by LIPOMED affiliates are manufactured by LIPOMED AG and distributed under protocols of LIPOMED AG.

