

Alcohol I – Alcohol Congener – Serum & Water

2026-06

1.1 / 1.2

For quality monitoring of quantitative measurements by chromatographic methods

Medidrug® BGS-I S L0 Blank Serum

This blank serum matrix can also be used to manufacture a serum based reference material with suitable concentration ranges by spiking the solution **91381 Medidrug BGS W High** (10 times higher than level W-cal 7) into it (for internal quality controls).

Our reference materials are produced exclusively on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® BGS W-cal

Ready-to-use solution in 7 levels for calibration of congener alcohol determinations. The indicated target values are determined by independent accredited laboratories.

Medidrug® BGS W High

Concentrated solution (10 times higher than level W-cal 7) to manufacture serum based reference materials: By spiking into **91101 Medidrug BGS S L0** to obtain suitable concentration ranges.

Medidrug®		Serum	Water								
Congener Alcohols		target values BGS-I S 11 analytes	target values BGS W-cal 11 analytes								target values BGS W 11 analytes
Analyte	Unit	L0	cal 1	cal 2	cal 3	cal 4	cal 5	cal 6	cal 7	High	
Acetone	mg/L	< LOD	0.5	1.0	1.5	2.0	2.5	5.0	10	100	
Methanol	mg/L	< LOD	1.0	2.0	3.0	4.0	5.0	10	20	200	
1-Butanol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
2-Butanol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
2-Butanon	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
Isobutanol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
2-Methyl-1-butanol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
3-Methyl-1-butanol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
Methyl-1-butanol, total	mg/L	< LOD	0.2	0.4	0.6	0.8	1.0	2.0	4.0	40	
1-Propanol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
Propan-2-ol	mg/L	< LOD	0.1	0.2	0.3	0.4	0.5	1.0	2.0	20	
Ethanol	g/L	< LOD	1.5	1.5	1.5	1.5	1.2	1.5	1.2	12	
Order information		REF	REF	REF	REF	REF	REF	REF	REF	REF	
10 x 1,2 ml Ampoules		91101	91311	91321	91331	91341	91351	91361	91371	91381	



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 Certified quality management according to DIN EN ISO 9001:2015
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Contact us:

+ 49 (0)7157 / 5304 - 0
 + 49 (0)7157 / 5304 - 11
 info@medichem.de

Alcohol III – Ethanol – Serum

2026-06

1.3

For quality monitoring of quantitative measurements by enzymatic method (ADH) and gas chromatography (GC)

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® **Ethanol S**

Ready-to-use liquid serum-based reference materials for calibration or accuracy monitoring of ethanol determination. The indicated target values are determined by independent accredited laboratories.

Medidrug®		Serum									
Ethanol		target value									
		Ethanol S									
		1 analyte									
Analyte	Unit	020	030	050	080	110	130	150	200	300	400
Ethanol	g/L	0.2	0.3	0.5	0.8	1.1	1.3	1.5	2.0	3.0	4.0
Order information		REF	REF	REF	REF	REF	REF	REF	REF	REF	REF
10 x 1.2 ml (amp.)		--	11030	11050	11080	11110	11130	11150	11200	11300	11400
10 x 1.5 ml (vials)		--	11032	11052	11082	--	11132	11152	11202	11302	11402
10 x 3.0 ml (vials)		11023	11033	11053	11083	11113	11133	--	11203	11303	11403



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Alcohol IV – Ethanol & Alcohols – Whole Blood

2026-06

1.4

For quality monitoring of quantitative measurements gas chromatography (GC)

Our reference materials for measurements in whole blood are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® **ALC VB** (Ethanol & Alcohols)

Ready-to-use liquid whole blood-based reference materials for calibration or accuracy monitoring of determination of ethanol and further alcohols. Indicated target values are determined by independent accredited laboratories.

Medidrug®		▶ Ethanol + Alcohols in Whole Blood								
Alcohol		target values								
		ALC VB								
		4 analytes								
Analyte	Unit	000	030	050	080	100	110	200	300	400
Ethanol	g/L	< LOD	0.3	0.5	0.8	1.0	1.1	2.0	3.0	4.0
Methanol	mg/L	< LOD	50	100	200	250	300	500	750	1000
Acetone	mg/L	< LOD	10	25	50	75	100	300	500	1000
Propan-2-ol	mg/L	< LOD	10	25	50	75	100	300	500	1000
Order Information		REF	REF	REF	REF	REF	REF	REF	REF	REF
10 x 0.6 ml (amp.)		11V000BF	-	11V050BF	11V080BF	-	11V110BF	11V200BF	11V300BF	--
10 x 1.2 ml (amp.)		11V000DF	11V030DF	11V050DF	11V080DF	11V100DF	11V110DF	11V200DF	11V300DF	11V400DF
10 x 1.5 ml (vials)		11V000EF	11V030EF	11V050EF	11V080EF	11V100EF	11V110EF	11V200EF	11V300EF	11V400EF



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Alcohol V – Ethanol – Water

2026-06

1.5

For quality monitoring of quantitative measurements by enzymatic method (ADH) and gas chromatography (GC)

Medidrug® **Ethanol W**

Ready-to-use liquid aqueous standards for calibration of ethanol determination. The indicated target values have been verified by independent accredited laboratories.

Medidrug®		Water									
Ethanol		target values									
		Ethanol W									
		1 analyte									
Analyte	Unit	010	020	050	080	100	150	200	300	400	500
Ethanol	g/L	0.1	0.2	0.5	0.8	1.0	1.5	2.0	3.0	4.0	5.0
Order Information		REF	REF	REF	REF	REF	REF	REF	REF	REF	REF
10 x 1.2 ml (amp.)		20010	20020	20050	20080	20100	20150	20200	20300	20400	20500



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Alcohol VI – Consumption Markers – Pure substance

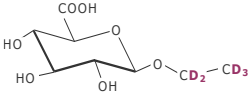
2026-06

1.6

For quality monitoring of quantitative measurements by chromatographic methods

Medidrug® **Ethylglucuronid-D₅**

Pure substance to be used as isotope-labelled internal standard for determinations of ethyl glucuronide for alcohol abuse verification and abstinence control.

Medidrug®		Pure substance
Ethyl glucuronide		<p>Ethyl glucuronide-D₅</p>  <p>$C_8H_9D_5O_7$</p>
Chemical name	MW:	227 g/mol
Ethyl-β-D-glucopyranosiduronic acid		---
Ethyl-β-D-glucopyranosiduronic acid-D ₅		Purity: ≥ 99 %
Order Information		REF
1 x 2 mg (powder)		70502
1 x 10 mg (powder)		70510



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Alcohol VII - Consumption Markers – Hair

2026-06

1.7

Reference materials from cut hair for quality assurance of quantitative analyses

The unique quality of our matrix reference materials is setting a new standard for hair analyses. The manufacturing principle is based upon a special procedure for reliable and non-destructive homogenization of hair fibres : Without milling and thus without the loss of their structural integrity. A precisely defined cutting length allows that after reduction, each processed hair fibre is present in extremely uniform segments of 1 mm length.



Medidrug® **ALCM H-a (authentic)**

GC-MS/MS, LC-MS/MS

Authentic cut reference material for determination of alcohol consumption markers in hair, manufactured from hair of European alcoholic beverage consumers. It is appropriate for method development and validation as well as for internal quality control. Compared to milled or spiked hair samples our reference material can be washed too. This assures a comprehensive quality control for the entire analytical process. The yield of ethyl glucuronide extracts from these reference material is to be monitored (please see following information). The target values have been established within the bounds of the proficiency tests by the Society of Hair Testing SoHT in cooperation with the Federal Institute for Materials Research and Testing (BAM) and MEDICHEM. The samples' homogeneity has been controlled under repeatability conditions.

Important information:

At present, many extraction methods still tend to insufficient ethyl glucuronide yield. From 2011 to 2013, many proficiency tests by the SoHT - using samples from MEDICHEM - showed, that from milled hair significantly more ethyl glucuronide was extracted than from otherwise usual cut hair samples.

This observation gave reason to use solely values determined from extracts of milled hair samples (from the proficiency tests by the SoHT). In 2019, the SoHT published a recommendation for milling samples before extraction (Consensus SoHT, Lille, May 2019).




Medidrug® **Basis-line H-a**

Authentic reference material, made from hair of European donors. For base-line determination in different applications or as negative control for ethyl glucuronide and 62 more components¹⁾.

Medidrug®		Hair – authentic					
Alcohol consumption markers		ALCM series H-a 2 analytes					Basis-line H-a 63 analytes ¹⁾
Analyte	Unit	1/11-C	12-A	12-B	14-A	14-B	NEG
Ethyl glucuronide	pg/mg	22.9 ²⁾	50.6 ²⁾	82.5 ²⁾	8.5 ²⁾	28.8 ²⁾	< LOD
Ethyl palmitate ⁴⁾	pg/mg	274 ³⁾	875 ³⁾	181 ³⁾	108 ³⁾	571 ³⁾	
Fatty acid ethyl esters, total	pg/mg	1342 ³⁾	3218 ³⁾	498 ³⁾	358 ³⁾	2080 ³⁾	
Order Information		REF	REF	REF	REF	REF	REF
1 x 100 mg (vial)		15HR02VA	15HR03VA	15HR04VA	15HR10VA	15HR11VA	00HL00VA
1 x 300 mg (vial)		15HR02XA	15HR03XA	15HR04XA	15HR10XA	15HR11XA	00HL00XA
		LOT	LOT	LOT	LOT	LOT	

- 1) Amphetamines, benzodiazepines, cannabinoids, cocaine, opioid substitution drugs, opiates
- 2) Target values by SoHT: determinations solely from hair samples milled before extraction
- 3) The proficiency test (SoHT) was performed with no specified target values; indicated values (without washing) are for orientation purpose. For more information, please request the CoA at info@medichem.de
- 4) Consensus SoHT 2019: For evaluating alcohol consumption, only values of ethyl palmitate are used

LOT The catalogue code (REF) of products marked with this symbol defines a singular lot (batch) which has been produced especially for an external quality control (proficiency testing). After expiry of the validity or after being sold out this product is no longer available. New lots with similar compositions of components will be offered with a different catalog code. If the material has been approved by the direction of proficiency testing according to the organizing association or reference institution and thus get an internal quality control we proceed in this manner.

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Alcohol VII – Consumption Markers – Hair **2026-06** **1.7**

Medidrug® **EtG** H-d (spiked)

(UP)LC-MS/MS

Gravimetrically spiked cut reference material in 11 levels for determination of ethyl glucuronide in hair, prepared from hair of European donors. The reference material is suitable for internal quality control of the determination of ethyl glucuronide in hair. The gravimetric value has been verified by the BAM Federal Institute for Materials Research and Testing performing multiple determinations. Homogeneity of the samples is controlled under repetitive conditions.

Medidrug®		Hair – spiked										
Ethyl Glucuronide		EtG H-d										
		1 analyte										
Analyte	Unit	000	004	005	007	020	025	030	040	50	100	200
Ethyl Glucuronide	pg/mg	< LOD	4	5	7	20	25	30	40	50	100	200
Order Information		REF	REF	REF	REF	REF	REF	REF	REF	REF	REF	REF
1 x 100 mg (vial)		15HL00VA	15HL02VA	15HL03VA	15HL04VA	15HL06VA	15HL07VA	15HL08VA	15HL09VA	15HL10VA	15HL11VA	15HL12VA
10 x 100 mg (vial)		15HL00VF	15HL02VF	15HL03VF	15HL04VF	15HL06VF	15HL07VF	15HL08VF	15HL09VF	15HL10VF	15HL11VF	15HL12VF



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For quality monitoring of quantitative measurements

Medidrug® **Thiopental S**

GC-MS/MS, (HP)LC-MS/MS

Lyophilized serum-based reference material for accuracy monitoring of thiopental determination. The indicated target values are determined by independent accredited laboratories.

Our reference materials are produced exclusively on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products matrix with the matrix of the patients' sample.

Medidrug® **TABD S**

GC-MS/MS, (HP)LC-MS/MS

Lyophilized serum-based reference material for accuracy monitoring of toxicological analysis for brain death diagnostics. The indicated target values are determined by independent accredited laboratories.

Medidrug®		Serum		
Barbiturates		target value		
		Thiopental S		
		1 analyte		
Analyte	Unit	Level 1	Level 2	Level 3
Thiopental	mg/L	5	20	40
Order information		REF	REF	REF
2 x 2.5 ml (vials)		29SL01GB	29SL02GB	29SL03GB
Set: 3 x 1 x 2.5 ml (vials)			29SS01GH	
Lyophilisate				

Medidrug®		Serum		
Toxicological Analysis for Brain Death Diagnostics		target values		
		TABD S		
		11 analytes		
Analyte	Unit			
Diazepam	µg/L	100		
Desmethyldiazepam	µg/L	200		
Etomidat	mg/L	0.1		
Fentanyl	µg/L	1.0		
Methohexital	mg/L	0.5		
Midazolam	µg/L	50		
Phenobarbital	mg/L	10		
Pentobarbital	mg/L	1.0		
Propofol	mg/L	1.0		
Sufentanil	µg/L	0.5		
Thiopental	mg/L	1.0		
Order information		REF		
3 x 2.5 ml (vials)		20SL01GH		
Lyophilisate				



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Benzodiazepines – Serum

2026-06

1.9

For quality monitoring of quantitative measurements

Our reference materials are produced exclusively on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® **Benzodiazepines S**

GC-MS/(MS), (UP)LC-MS/(MS)

Lyophilized controls for accuracy monitoring of benzodiazepines determination in serum. The indicated target values are determined by independent accredited laboratories.

Medidrug® **Basis-line S**

GC-MS/(MS), (UP)LC-MS/(MS)

Lyophilized serum based reference material for base line determination in different applications or as negative control. (All components at 1.13 Blank Matrices.)

Medidrug®			Serum			
Benzodiazepines			target values Benzodiazepine S 27 analytes			target values Basis-line S 91 analytes (excerpt)
Group	Analyte	Unit	L1	L2	L3	Negativ
Benzodiazepines	7-Aminoclonazepam	µg/L	10	50	100	< LOD
	Alprazolam	µg/L	2	10	60	< LOD
	α-Hydroxyalprazolam	µg/L	5	20	100	< LOD
	Bromazepam	µg/L	10	100	300	< LOD
	3-Hydroxybromazepam	µg/L	10	50	200	< LOD
	Clonazepam	µg/L	5	20	100	< LOD
	Diazepam	µg/L	50	100	600	< LOD
	N-Desmethyldiazepam	µg/L	50	100	600	< LOD
	Flunitrazepam	µg/L	5	20	50	< LOD
	7-Aminoflunitrazepam	µg/L	2	10	60	< LOD
	N-Desmethylflunitrazepam	µg/L	5	20	50	< LOD
	Flurazepam	µg/L	5	20	50	< LOD
	N-Desalkylflurazepam	µg/L	10	50	100	< LOD
	Lorazepam	µg/L	10	50	200	< LOD
	Lormetazepam	µg/L	2	10	60	< LOD
	Midazolam	µg/L	10	50	200	< LOD
	Nitrazepam	µg/L	10	50	200	< LOD
	Oxazepam	µg/L	50	100	600	< LOD
	Phenazepam	µg/L	10	50	200	< LOD
	Temazepam	µg/L	50	100	600	< LOD
Tetrazepam	µg/L	50	100	600	< LOD	
Triazolam	µg/L	5	20	100	< LOD	
Thienodiazepines	Etizolam	µg/L	10	50	200	< LOD
Z-Drugs	2-Amino-5-chloropyridine (ACP)	µg/L	10	50	100	< LOD
	Zaleplon	µg/L	5	20	100	< LOD
	Zolpidem	µg/L	10	50	200	< LOD
	Zopiclone	µg/L	5	20	100	< LOD
Order Information			REF	REF	REF	REF
10 x 2.5 ml (vials)			23SL01GF	23SL02GF	23SL03GF	40151
Set: 3 x 3 x 2.5 ml (vials)				23SS01KF		
Lyophilisate						



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Drugs of Abuse I – Serum / Whole Blood

2026-06

1.10

For quality monitoring of quantitative measurements by chromatographic methods

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® **DOA-I S / VB**

GC-MS/(MS), (UP)LC-MS/(MS)

Lyophilized serum- or whole blood based reference material for quality assurance of the determination of drugs of abuse. The indicated target values are determined by independent accredited laboratories; the determinations themselves are respecting the guidelines RiLiBÄK (by the German Medical Association) and those by the GTFCh (Society for Toxicology and Forensic Chemistry in Germany).

Medidrug® **Basis-line S / VB**

Lyophilized reference material for base line determination in different applications or as negative control (All components at 1.13 Blank Matrices).

Medidrug®			Serum				Whole Blood			
Drugs of Abuse			target values DOA-I S 40 analytes			target values Basis-line S 91 analytes (excerpt)	target values DOA-I VB 40 analytes			target values Basis-line VB 76 analytes (excerpt)
Group	Analyte	unit	Low	Mid	High	Negative	Low	Mid	High	Negative
Amines / Amphetamines	Amphetamine	µg/L	25	90	150	< LOD	25	90	150	< LOD
	MBDB	µg/L	25	60	100	< LOD	25	60	100	< LOD
	MDA	µg/L	25	60	100	< LOD	25	60	100	< LOD
	MDE (MDEA)	µg/L	25	90	150	< LOD	25	90	150	< LOD
	MDMA („Ecstasy“)	µg/L	25	90	150	< LOD	25	90	150	< LOD
	Methamphetamine	µg/L	25	90	150	< LOD	25	90	150	< LOD
	Methylphenidate	µg/L	10	30	60	< LOD	10	30	60	< LOD
	Ritalinic acid -New-	µg/L	10	50	100	<LOD	10	50	100	--
Cannabinoids	CBD	µg/L	5	25	100	< LOD	5	25	100	< LOD
	THC	µg/L	1	10	15	< LOD	1	10	15	< LOD
	11-OH-THC	µg/L	1	5	10	< LOD	1	10	10	< LOD
	THC-COOH	µg/L	10	60	120	< LOD	10	60	120	< LOD
Cathinone	Mephedrone	µg/L	25	90	150	< LOD	25	90	150	< LOD
	Methedrone	µg/L	25	90	150	< LOD	25	90	150	< LOD
	Methylone	µg/L	25	90	150	< LOD	25	90	150	< LOD
Cocaine	Cocaine	µg/L	15	50	90	< LOD	15	50	90	< LOD
	Benzoylcegonine	µg/L	50	200	400	< LOD	50	200	400	< LOD
	Cocaethylene	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Ecgonine methyl ester	µg/L	15	50	90	< LOD	15	50	90	< LOD
GHB	GHB	mg/L	1	5	20	< LOD	1	5	20	< LOD
LSD	LSD -New-	µg/L	0,5	2,5	10	<LOD	0,5	2,5	10	<LOD



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Medidrug®			Serum				Whole Blood			
Drugs of Abuse			target values			target values	target values			target values
			DOA-I S			Basis-line S	DOA-I VB	Basis-line VB		
			34 / 35 analytes			91 analytes (excerpt)	38 analytes			76 analytes (excerpt)
Group	Analyte	unit	Low	Mid	High	Negative	Low	Mid	High	Negative
Opioids	6-MAM	µg/L	5	25	50	< LOD	5	25	50	< LOD
	Codeine	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Dihydrocodeine	µg/L	40	100	200	< LOD	40	100	200	< LOD
	Ethylmorphine	µg/L	40	90	200	< LOD	35	100	180	< LOD
	Fentanyl	µg/L	1	5	10	< LOD	1	5	10	< LOD
	Norfentanyl	µg/L	1	5	10	< LOD	1	5	10	< LOD
	Hydrocodone	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Hydromorphone	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Ketamine	µg/L	5	25	100	-	5	25	100	-
	Norketamine	µg/L	5	25	100	-	5	25	100	-
	Morphine	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Oxycodone	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Oxymorphone	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Pholcodine	µg/L	25	90	150	< LOD	25	90	150	< LOD
	Tilidine	µg/L	25	90	135	< LOD	25	90	150	< LOD
	Nortilidine	µg/L	25	90	150	< LOD	25	90	150	< LOD
Tramadol	µg/L	50	100	200	< LOD	50	100	200	< LOD	
o-Desmethyltramadol	µg/L	100	200	400	< LOD	100	200	400	< LOD	
Piperazines	Benzylpiperazine	µg/L	10	60	100	< LOD	10	60	100	< LOD
Order Information			REF	REF	REF	REF	REF	REF	REF	REF
10 x 2.5 ml (vials), Lyophilisate			24SL01GF	24SL02GF	24SL03GF	40151	24VL01GF	24VL02GF	24VL03GF	40161

For more detailed information, please ask for the CoA at info@medichem.de.



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 DIN EN ISO 13485:2016

Contact us:

+ 49 (0)7157 / 5304 - 0
 + 49 (0)7157 / 5304 - 11
 info@medichem.de

Drugs of Abuse II – Hair

2026-06

1.11

Hair reference materials from cut hair for quality monitoring of quantitative analyses

Medidrug® DOA H-d, Level 0-5

GC-MS/(MS), LC-MS/(MS)

The unique quality of our matrix reference materials is setting a new standard for hair analyses. The manufacturing principle is based upon a special procedure for reliable and non-destructive homogenization of hair fibres : Without milling and thus without the loss of their structural integrity. A precisely defined cutting length allows that after reduction, each processed hair fibre is present in extremely uniform segments of 1 mm length.

Lot series of extremely homogeneous hair reference materials in six relevant concentration levels, prepared from four meticulously homogenized drug-free hair pools of cut European human hair. Spiked gravimetrically with 64 drugs of abuse and their metabolites, we have considered relevant limits of quantification or detection (method-dependent) and cut-off ranges (by German and various international professional societies). The homogeneity has been controlled under repetitive conditions.

Medidrug®			Hair – spiked					
Drugs of Abuse			DOA H-d 64 analytes					
Group	Analyte	Unit	L0	L1	L2	L3	L4	L5
Amphetamines	Amphetamine	pg/mg	0	70	140	270	650	1,800
	MBDB	pg/mg	0	70	140	270	650	1,800
	MDA	pg/mg	0	70	140	270	650	1,800
	MDE(A)	pg/mg	0	70	140	270	650	1,800
	MDMA	pg/mg	0	70	140	270	650	1,800
	Methamphetamine	pg/mg	0	70	140	270	650	1,800
	Methylphenidate	pg/mg	0	70	140	270	650	1,800
	Phentermine	pg/mg	0	70	140	270	650	1,800
Benzodiazepines + Z-Drugs	Alprazolam	pg/mg	0	2	24	60	240	960
	α-Hydroxyalprazolam	pg/mg	0	2	24	60	240	960
	7-Aminoclonazepam	pg/mg	0	2	24	60	240	960
	7-Aminoflunitrazepam	pg/mg	0	2	24	60	240	960
	Bromazepam	pg/mg	0	2	24	60	240	960
	Clonazepam	pg/mg	0	2	24	60	240	960
	Diazepam (Valium)	pg/mg	0	2	24	60	240	960
	Desmethyl(Nor-)diazepam	pg/mg	0	2	24	60	240	960
	Flunitrazepam	pg/mg	0	2	24	60	240	960
	Flurazepam	pg/mg	0	2	24	60	240	960
	Lorazepam	pg/mg	0	2	24	60	240	960
	Lormetazepam	pg/mg	0	2	24	60	240	960
	Midazolam	pg/mg	0	2	24	60	240	960
	Nitrazepam	pg/mg	0	2	24	60	240	960
	Oxazepam	pg/mg	0	2	24	60	240	960
	Temazepam	pg/mg	0	2	24	60	240	960
	Tetrazepam	pg/mg	0	2	24	60	240	960
Zolpidem	pg/mg	0	2	24	60	240	960	
Zopiclone	pg/mg	0	2	24	60	240	960	
Cannabinoides	THC	pg/mg	0	12	24	60	120	720
	CBD (Cannabidiol)	pg/mg	0	24	60	120	240	720
	CBN (Cannabinol)	pg/mg	0	24	60	120	240	720
	THC-COOH	pg/mg	0	0.1	0.5	2	6	12
	11-OH-THC	pg/mg	0	24	60	120	600	1,800

For more detailed information, please ask for the CoA at info@medichem.de.

Information about further analytes groups (Cocaine, Hallucinogens, Opioids and Substitutions for Opioids) as well as about the package content and order information: please see following page



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Drugs of Abuse II – Hair

2026-06




1.11

Hair reference materials from cut hair for quality monitoring of quantitative analyses

Medidrug® DOA H-d, Level 0-5

Medidrug®			Hair – spiked					
Drugs of Abuse			DOA H-d 64 analytes					
Group	Analyte	Unit	L0	L1	L2	L3	L4	L5
Cocaine	Anhydroecgonine methyl ester	pg/mg	0	24	6	120	600	1,800
	Benzoyllecgonine	pg/mg	0	24	60	200	750	3,000
	Cocaethylene	pg/mg	0	24	60	120	600	1,800
	Cocaine	pg/mg	0	60	120	600	1,200	8,400
	Ecgonine methyl ester	pg/mg	0	24	60	150	750	3,000
	Norcocaine	pg/mg	0	24	60	120	600	1,800
Hallucinogens	Ketamine	pg/mg	0	24	60	120	600	1,800
	Norketamine	pg/mg	0	24	60	120	600	1,800
	LSD	pg/mg	0	6	12	60	150	720
	Phencyclidine	pg/mg	0	24	60	150	750	3,000
Opioids	Codeine	pg/mg	0	70	140	270	650	1,800
	Acetylcodeine	pg/mg	0	70	140	270	650	1,800
	Dihydrocodeine	pg/mg	0	70	140	270	650	1,800
	Fentanyl	pg/mg	0	6	12	60	150	720
	Hydrocodone	pg/mg	0	24	60	120	240	720
	Hydromorphone	pg/mg	0	24	60	120	240	720
	Morphine	pg/mg	0	70	140	270	650	1,800
	6-MAM	pg/mg	0	70	140	270	650	1,800
	Norfentanyl	pg/mg	0	1	6	30	180	720
	Oxycodone	pg/mg	15	50	70	120	240	720
	Oxymorphone	pg/mg	0	24	60	120	240	720
	Pregabalin	pg/mg	0	12	24	120	600	1,800
	Tilidine	pg/mg	0	24	60	120	240	720
	Nortilidine	pg/mg	0	24	60	120	240	720
	Tapentadol	pg/mg	0	24	60	120	240	1,800
	Tramadol	pg/mg	0	24	60	120	600	1,800
	N-Desmethyl-Tramadol	pg/mg	0	24	60	120	600	1,800
	O-Desmethyl-cis-Tramadol	pg/mg	0	24	60	120	600	1,800
Opioid Substitution	Buprenorphine	pg/mg	0	6	12	60	150	720
	Norbuprenorphine	pg/mg	0	6	12	60	150	720
	Methadone	pg/mg	0	70	140	270	650	1,800
	EDDP	pg/mg	0	24	60	150	750	3,000
Order information			REF	REF	REF	REF	REF	REF
1 x 100 mg (vial)			24HL00VA	24HL01VA	24HL02VA	24HL03VA	24HL04VA	24HL05VA
1 mm cut								

For more detailed information, please ask for the CoA at info@medichem.de.

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For quality monitoring of quantitative measurements by chromatographic methods

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products matrix with the matrix of the patients' sample.

Medidrug® **CTU Confirm. U**

GC-MS/MS, (UP)LC-MS/MS

Lyophilized reference material for quality control of confirmation analysis, prepared from human urine. The concentrations of the added substances for chemical-toxicological analysis -CTU¹⁾- are -25 % respectively +25 % of the recommended cut-offs. Further substances and their target values suit to the CTU criteria²⁾. All target values are determined by independent accredited laboratories.

Medidrug® **Basis-line U**

GC-MS/MS, (UP)LC-MS/MS

Lyophilized reference material, prepared from human urine for base-line determination in different applications or as negative control. (All components at 1.13 Blank Matrices).

Medidrug®			Urine		
Diagnostic for Drugs, Medicaments and Alcohol Consumption Markers (suit to CTU criteria) ¹			target values CTU Confirm. U 65 analytes		target values Basis-line U 79 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Alcohol Consumption markers	Ethyl glucuronide	µg/L	75.0	125.0	< LOD
	Ethyl sulfate ²⁾	µg/L	56.5	94.0	< LOD
Amphetamines	Amphetamine	µg/L	22.5	37.5	< LOD
	MBDB ²⁾	µg/L	37.5	62.5	< LOD
	MDA	µg/L	37.5	62.5	< LOD
	MDE (MDEA)	µg/L	37.5	62.5	< LOD
	MDMA („Ecstasy“)	µg/L	37.5	62.5	< LOD
	Methamphetamine	µg/L	22.5	37.5	< LOD
Barbiturates	Amobarbital	-New- µg/L	22.5	37.5	< LOD
	Pentobarbital	-New- µg/L	22.5	37.5	< LOD
	Phenobarbital	µg/L	22.5	37.5	< LOD
	Secobarbital	µg/L	22.5	37.5	< LOD
Benzodiazepines and Z-Drugs	Alprazolam ²⁾	µg/L	37.5	62.5	< LOD
	α-Hydroxyalprazolam	µg/L	37.5	62.5	< LOD
	Bromazepam	µg/L	37.5	62.5	< LOD
	3-Hydroxybromazepam	µg/L	37.5	62.5	< LOD
	Clonazepam ²⁾	µg/L	37.5	62.5	< LOD
	7-Aminoclonazepam ²⁾	µg/L	37.5	62.5	< LOD
	Diazepam	µg/L	37.5	62.5	< LOD
	Desmethyl(Nor-)diazepam	µg/L	37.5	62.5	< LOD
	Flunitrazepam ²⁾	µg/L	37.5	62.5	< LOD
	7-Aminoflunitrazepam	µg/L	37.5	62.5	< LOD
	Flurazepam ²⁾	µg/L	37.5	62.5	< LOD
	Lorazepam	µg/L	37.5	62.5	< LOD
	Lormetazepam ²⁾	µg/L	37.5	62.5	< LOD
	Midazolam ²⁾	µg/L	37.5	62.5	< LOD
	Nitrazepam ²⁾	µg/L	37.5	62.5	< LOD
	Oxazepam	µg/L	37.5	62.5	< LOD
	Phenazepam ²⁾	µg/L	37.5	62.5	< LOD
	Temazepam ²⁾	µg/L	37.5	62.5	< LOD
Zaleplon ²⁾	µg/L	37.5	62.5	< LOD	
Zolpidem ²⁾	µg/L	37.5	62.5	< LOD	
Zopiclone ²⁾	µg/L	37.5	62.5	< LOD	

¹⁾ **CTU**: Chemical-toxicological analysis: Evaluation for driving fitness (guidelines DGVP & DGVM in Germany, 2022-11);

²⁾ according to this

For more detailed information, please ask for the CoA at info@medichem.de.



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Information about further analytes groups (Cocaine, Hallucinogens, Opioids and Substitutions for Opioids) as well as about package content and order information: please see following page

Medidrug® Reference Materials

Toxicological and Clinical Chemistry

Drugs of Abuse III – Urine

2026-06

1.12

For quality monitoring of quantitative measurements by chromatographic methods

Medidrug® **CTU Confirm.** U

Medidrug® **Basis-line** U

Medidrug®			Urine		
Diagnostic for Drugs, Medicaments and Alcohol Consumption Markers (suit to CTU criteria) ¹			target values CTU Confirm. U 65 analytes		target values Basis-line U 79 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Cannabinoides	THC-COOH	µg/L	5.6	9.3	< LOD
	CBD ²⁾ (Cannabidiol)	-New- µg/L	5.6	9.3	< LOD
Cathinones	Mephedrone ²⁾	µg/L	37.5	62.5	< LOD
	Methylenedioxypropylvalerone (MDPV) ²⁾	µg/L	37.5	62.5	< LOD
Cocaine	Benzoylcegonine	µg/L	22.5	37.5	< LOD
	Ecgonine methyl ester ²⁾	µg/L	22.5	37.5	< LOD
Hallucinogens	Ketamine ²⁾	µg/L	37.5	62.5	< LOD
	LSD ²⁾	µg/L	0.38	0.63	< LOD
	Methaqualone ²⁾	µg/L	18.75	31.25	< LOD
	Phencyclidine (PCP) ²⁾	µg/L	18.75	31.25	< LOD
Opioids	6-MAM (6-Monoacetylmorphine) ²⁾	µg/L	7.5	12.5	< LOD
	Codeine	µg/L	18.75	31.25	< LOD
	Dihydrocodeine	µg/L	18.75	31.25	< LOD
	Norcodeine ²⁾	µg/L	37.5	62.5	< LOD
	Fentanyl	µg/L	7.5	12.5	< LOD
	Norfentanyl	µg/L	7.5	12.5	< LOD
	Hydrocodone ²⁾	-New- µg/L	37.5	62.5	< LOD
	Hydromorphone ²⁾	µg/L	37.5	62.5	< LOD
	Morphine	µg/L	18.75	31.25	< LOD
	d-Norpropoxyphene ²⁾	-New- µg/L	18.75	31.25	< LOD
	Oxycodone	µg/L	37.5	62.5	< LOD
	Oxymorphone ²⁾	µg/L	37.5	62.5	< LOD
	Propoxyphene ²⁾	µg/L	18.75	31.25	< LOD
	Tilidine	µg/L	37.5	62.5	< LOD
	Nortilidine ²⁾	µg/L	48.75	81.25	< LOD
	Tramadol	µg/L	37.5	62.5	< LOD
O-Desmethyltramadol	µg/L	37.5	62.5	< LOD	
Opioid Substitution	Buprenorphine ²⁾	µg/L	1.5	2.5	< LOD
	Norbuprenorphine ²⁾	µg/L	1.5	2.5	< LOD
	Methadone	µg/L	37.5	62.5	< LOD
	EDDP	µg/L	37.5	62.5	< LOD
Piperazine	Benzylpiperazine	-New- µg/L	37.5	62.5	< LOD
Order Information			REF	REF	REF
12 x 3 ml (vials)			26U Q01 HL	26U Q02 HL	40201
Lyophilisate					

¹⁾ **CTU**: Chemical-toxicological analysis: Evaluation for driving fitness (guidelines DGVP & DGVM in Germany, 2022-11) ;

²⁾ according to this

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Drugs of Abuse III – Urine

2026-06

1.12

For quality monitoring of quantitative measurements by chromatographic methods

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products matrix with the matrix of the patients' sample.

Medidrug® **WDT Confirm. U**

GC-MS/MS, (UP)LC-MS/MS

Lyophilized urine control, prepared from human urine containing drugs and medications. The concentrations of the added substances are -25 % respectively +25 % of the recommended cut-off by **EWDTs**¹⁾ for confirmation test. The target values of further analytes suit to the EWDTs guidelines²⁾. All target values are determined by independent accredited laboratories.

Medidrug® **Basis-line U**

GC-MS/MS, (UP)LC-MS/MS

Lyophilized reference material, prepared from human urine for base-line determination in different applications or as negative control. (All components at 1.13 Blank Matrices).

Medidrug®			Urine		
Workplace Drug Testing According to EWDTs limits ¹			target values WDT Confirm. U 66 analytes		target values Basis-line U 79 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Amphetamines	Amphetamine	µg/L	150	250	< LOD
	MBDB	µg/L	150	250	< LOD
	MDA	µg/L	150	250	< LOD
	MDE (MDEA)	µg/L	150	250	< LOD
	MDMA („Ecstasy“)	µg/L	150	250	< LOD
	Methamphetamine	µg/L	150	250	< LOD
Barbiturates	Amobarbital	-New- µg/L	112.5	187.5	< LOD
	Pentobarbital	-New- µg/L	112.5	187.5	< LOD
	Phenobarbital	µg/L	112.5	187.5	< LOD
	Secobarbital	µg/L	112.5	187.5	< LOD
Benzodiazepines and Z-Drugs	Alprazolam	µg/L	75	125	< LOD
	α-Hydroxyalprazolam ²⁾	µg/L	75	125	< LOD
	Bromazepam	µg/L	75	125	< LOD
	3-Hydroxybromazepam ²⁾	µg/L	75	125	< LOD
	Clonazepam	µg/L	75	125	< LOD
	7-Aminoclonazepam ²⁾	µg/L	75	125	< LOD
	Diazepam	µg/L	75	125	< LOD
	Desmethyl(Nor-)diazepam	µg/L	75	125	< LOD
	Flunitrazepam	µg/L	75	125	< LOD
	7-Aminoflunitrazepam ²⁾	µg/L	75	125	< LOD
	Flurazepam	µg/L	75	125	< LOD
	Lorazepam	µg/L	75	125	< LOD
	Lormetazepam	µg/L	75	125	< LOD
	Midazolam	µg/L	75	125	< LOD
	Nitrazepam	µg/L	75	125	< LOD
	Oxazepam	µg/L	75	125	< LOD
	Phenazepam	µg/L	75	125	< LOD
	Temazepam	µg/L	75	125	< LOD
	Zaleplon ²⁾	µg/L	75	125	< LOD
Zolpidem ²⁾	µg/L	75	125	< LOD	
Zopiclone ²⁾	µg/L	75	125	< LOD	
Cannabinoides	THC-COOH	µg/L	11.25	18.75	< LOD

1) **EWDTs**: European Workplace Drug Testing Society – 2022 European Guidelines for Workplace Drug Testing in Urine (pp 39-41);

2) according to this

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Drugs of Abuse III – Urine

2026-06

1.12

For quality monitoring of quantitative measurements by chromatographic methods







Medidrug® **WDT Confirm.** U

Medidrug® **Basis-line** U

Medidrug®			Urine		
Workplace Drug Testing According to EWDTs limits ¹			target values WDT Confirm. U 66 analytes		target values Basis-line U 79 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Cathinones	Mephedrone ²⁾	µg/L	150	250	< LOD
	Methylendioxypropylvalerone (MDPV) ²⁾	µg/L	150	250	< LOD
Cocaines	Benzoyllecgonine	µg/L	75	125	< LOD
	Ecgonin methyl ester	µg/L	75	125	< LOD
Hallucinogens	Ketamine ²⁾	µg/L	55	95	< LOD
	LSD	µg/L	0.75	1.25	< LOD
	Norketamine ²⁾	-New- µg/L	55	95	< LOD
	Methaqualone ²⁾	µg/L	225	375	< LOD
	Phencyclidine (PCP)	µg/L	18.75	31.25	< LOD
Opioids	6-MAM (6-Monoacetylmorphine)	µg/L	7.5	12.5	< LOD
	Codeine	µg/L	225	375	< LOD
	Dihydrocodeine	µg/L	225	375	< LOD
	Norcodeine ²⁾	µg/L	37.5	62.5	< LOD
	Fentanyl ²⁾	µg/L	0.75	1.25	< LOD
	Gabapentin	-New- µg/L	750	1250	< LOD
	Norfentanyl ²⁾	µg/L	0.75	1.25	< LOD
	Hydrocodone ²⁾	-New- µg/L	75	125	< LOD
	Hydromorphone ²⁾	µg/L	75	125	< LOD
	Morphine	µg/L	225	375	< LOD
	Morphin-3-β-D-glucuronide ²⁾	µg/L	225	375	< LOD
	d-Norpropoxyphene	-New- µg/L	225	375	< LOD
	Oxycodone ²⁾	µg/L	75	125	< LOD
	Oxymorphone ²⁾	µg/L	75	125	< LOD
	Pregabalin	µg/L	750	1250	< LOD
	Propoxyphene	µg/L	225	375	< LOD
	Tilidine ²⁾	µg/L	150	250	< LOD
	Nortilidine ²⁾	µg/L	75	125	< LOD
	Tramadol ²⁾	µg/L	75	125	< LOD
	O-Desmethyltramadol ²⁾	µg/L	75	125	< LOD
Opioid Substitution	Buprenorphine	µg/L	1.5	2.5	< LOD
	Norbuprenorphine	µg/L	1.5	2.5	< LOD
	Methadone	µg/L	187.5	312.5	< LOD
	EDDP	µg/L	56.25	93.75	< LOD
Piperazine	Benzylpiperazine	-New- µg/L	150	250	< LOD
Order Information			REF	REF	REF
12 x 3 ml (vials)			27U Q01 HL	27U Q02 HL	40201
Lyophilisate					

1) **EWDTs**: European Workplace Drug Testing Society – 2022 European Guidelines for Workplace Drug Testing in Urine (pp 39-41);
2) according to this

For more detailed information, please ask for the CoA at info@medichem.de.

  	The provided mixture of the controls and their respective analyte concentrations are for overview purposes only and may differ from the current available batches. For the internal quality control, only the designated specification of the respective batch of the certificate of analysis is valid.	Contact us:  + 49 (0)7157 / 5304 - 0  + 49 (0)7157 / 5304 - 11  info@medichem.de
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For quality monitoring of quantitative measurements

Medidrug® **Basis-line H**

GC-MS/MS, LC-MS/MS

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Authentic hair reference material, prepared from multiple European hair donors and homogenized by cutting into pieces of 1 mm. For negative control as well as for base-line determination in different applications in analytical laboratories.

Medidrug® **Basis-line S / U / VB**

(HS)GC-MS/(MS), (UP)LC-MS/(MS)

Lyophilized serum-, urine- or whole blood-based reference material. As negative control or base-line determination in different applications.

Medidrug®	Hair	Serum	Urine	Whole Blood
Blank Matrices	Basis-line H-a	Basis-line S	Basis-line U	Basis-line VB
Analyte Groups	63 analytes	91 analytes	79 analytes	76 analytes
Alcohol Consumption Markers	EtG (Ethyl glucuronide)	Ethanol	EtG (Ethyl glucuronide), EtS (Ethyl sulfate)	
Amines / Amphetamines	Amphetamine, MDA, MDE (MDEA), MDMA („Ecstasy“), Methamphetamine, Methylphenidate	Amphetamine, MBDB, MDA, MDE (MDEA), MDMA („Ecstasy“), Methamphetamine, Methylphenidate, Ritalinic Acid	Amphetamine, MBDB, MDA, MDE (MDEA), MDMA („Ecstasy“), Methamphetamine	Amphetamine, MBDB, MDA, MDE (MDEA), MDMA („Ecstasy“), Methamphetamine, Methylphenidate
Barbiturates			Amobarbital, Pentobarbital, Phenobarbital, Secobarbital	
Benzodiazepines / Z-Drugs / Thienodiazepines	Alprazolam, Bromazepam Clobazam, N-Desmethylclobazam, Clonazepam, 7-Aminoclonazepam, Demoxepam, Diazepam, Desmethyl-diazepam Flunitrazepam, 7-Aminoflunitrazepam, Flurazepam, Desalkylflurazepam, Lorazepam, Midazolam, Nitrazepam, 7-Aminonitrazepam Oxazepam, Temazepam, Tetrazepam, Triazolam, Zolpidem, Zopiclone	Alprazolam, α-Hydroxyalprazolam, Bromazepam, 2-Amino-5-chloropyridine (ACP), 3-Hydroxybromazepam Chlordiazepoxide, Clobazam, Desmethyclobazam, Clonazepam, 7-Aminoclonazepam, Demoxepam, Diazepam, Desmethyl-diazepam, Etizolam Flunitrazepam, 7-Aminoflunitrazepam, N-Desmethylflunitrazepam, Flurazepam, N-Desalkylflurazepam, Lorazepam, Lormetazepam, Midazolam, α-Hydroxy-midazolam, Nitrazepam, 7-Aminonitrazepam Oxazepam, Phenazepam, Prazepam, Temazepam, Tetrazepam, Triazolam, Zaleplon, Zolpidem, Zopiclone	Alprazolam, α-Hydroxyalprazolam, Bromazepam, 3-Hydroxybromazepam Chlordiazepoxide, Clobazam, Clonazepam, 7-Aminoclonazepam, Demoxepam, Diazepam, N-Desmethyl-diazepam Flunitrazepam, 7-Aminoflunitrazepam, N-Desmethylflunitrazepam, Flurazepam, N-Desalkylflurazepam, Lorazepam, Lormetazepam, Midazolam, 1-Hydroxymidazolam, Nitrazepam, 7-Aminonitrazepam Oxazepam, Phenazepam, Temazepam, Tetrazepam, Triazolam, Zaleplon, Zolpidem, Zopiclone	Alprazolam, α-Hydroxyalprazolam, Bromazepam, 2-Amino-5-chloropyridine (ACP) Clobazam, Desmethyclobazam, Clonazepam, 7-Aminoclonazepam, Chlordiazepoxide, Demoxepam, Diazepam, Desmethyl-diazepam, Etizolam Flunitrazepam, 7-Aminoflunitrazepam, N-Desmethylflunitrazepam, Flurazepam, N-Desalkylflurazepam, Lorazepam, Lormetazepam, Midazolam, 1-Hydroxymidazolam, Nitrazepam, 7-Aminonitrazepam Oxazepam, Phenazepam, Prazepam, Temazepam, Tetrazepam, Triazolam, Zaleplon, Zolpidem, Zopiclone
Cannabinoids	THC, CBD (Cannabidiol), CBN (Cannabinol)	CBD (Cannabidiol), THC, 11-OH-THC, THC-COOH	CBD (Cannabidiol), THC-COOH	CBD (Cannabidiol), THC, 11-OH-THC, THC-COOH
Cathinones		Mephedrone, Methedrone, Methylone	Mephedrone, MDPV (Methylenedioxypropylvalerone)	Mephedrone, Methedrone, Methylone
Cocaine	Cocaine, Norcocaine, Benzoylcegonine, Cocaethylene, Ecgonine methyl ester, Anhydroecgonine methyl ester	Cocaine, Benzoylcegonine, Cocaethylene, Ecgonine methyl ester	Benzoylcegonine, Ecgonine methyl ester	Cocaine, Benzoylcegonine, Cocaethylene, Ecgonine methyl ester
Congener Alcohols		Acetone, 1-Butanol, 2-Butanol, 2-Butanon, Methanol, 2-Methyl-1-butanol, 3-Methyl-2-butanol, 2-Methyl-1-Propanol, 1-Propanol, 2-Propanol		
GHB		GHB (4-hydroxybutanoic acid)	GHB (4-hydroxybutanoic acid)	GHB (4-hydroxybutanoic acid)
Hallucinogens	Ketamine, Norketamine	LSD	Ketamine, Norketamine, LSD, Methaqualone, PCP (Phencyclidine)	LSD
Opioids	6-MAM (6-Monoacetylmorphine), Codeine, 6-Acetylcodeine, Dihydrocodeine, Diacetylmorphine (Heroin) Fentanyl, Norfentanyl, Hydrocodone, Morphine, 6-Acetylmorphine, Hydromorphone Oxycodone, Oxymorphone Tilidine, Nortilidine, Tramadol, N-Desmethyltramadol, o-Desmethyltramadol	6-MAM (6-Monoacetylmorphine), Codeine, Acetylcodeine, Dihydrocodeine Fentanyl, Norfentanyl, Hydrocodone, Hydromorphone, Morphine, Dihydromorphine, Ethyl morphine Oxycodone, Oxymorphone, Pholcodine Tapentadol, Tilidine, Nortilidine, Bisnortilidine, Tramadol, o-Desmethyltramadol	6-MAM (6-Monoacetylmorphine), Codeine, Dihydrocodeine Fentanyl, Gabapentin, Norfentanyl, Morphine, Morphine-3-β-D-glucuronide, Hydrocodone, Hydromorphone Norcodeine, d-Norpropoxyphene, Oxycodone, Oxymorphone, Pregabalin, Propoxyphene Tilidine, Nortilidine, Tramadol, o-Desmethyltramadol	6-MAM (6-Monoacetylmorphine), Acetylcodeine, Codeine, Dihydrocodeine, Ethyl morphine Fentanyl, Norfentanyl, Hydrocodone, Hydromorphone, Morphine Oxycodone, Oxymorphone, Pholcodine Tapentadol, Tilidine, Nortilidine, Tramadol, o-Desmethyltramadol
Opioids (Substitution)	Buprenorphine, Norbuprenorphine, Methadone, EDDP	Buprenorphine, Norbuprenorphine, Methadone, EDDP	Buprenorphine, Norbuprenorphine, Methadone, EDDP	Buprenorphine, Norbuprenorphine, Methadone, EDDP
Piperazines		Benzylpiperazine	Benzylpiperazine	Benzylpiperazine
Order Information	REF 1 x 100 mg: 00HL00VA 1 x 300 mg: 00HL00XA	REF 40151 10 x 2.5 ml (vials)	REF 40201 9 x 5 ml (vials)	REF 40161 10 x 2.5 ml (vials)



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DIN EN ISO 13485:2016

Contact us:

+ 49 (0)7157 / 5304 - 0
+ 49 (0)7157 / 5304 - 11
info@medichem.de

Opioid Substitution Drugs I – Serum / Whole Blood
2026-06
1.14
For quality monitoring of quantitative measurements

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® OSD S / VB

(UP)LC-MS/(MS)

Lyophilized reference material, based on serum or whole blood, for quality assurance of the determination of opioid substitution drugs. The indicated target values are determined by independent accredited laboratories (EN ISO 17025).

The analyses were performed according to the guidelines of the German Medical Association for Quality Assurance (RiliBÄK) and the guidelines of the GTFCh (Society of Toxicological and Forensic Chemistry in Germany).

Our controls are also available in a set, containing a blank serum (L0) for method validation or base line determination; all control levels and blank matrices in serum share the same serum matrix.

Medidrug®		Serum					Whole Blood		
Opioid Substitution Drugs		target values					target values		
		OSD S					OSD VB		
		8 analytes					8 analytes		
Analyte	Unit	L0	L1	L2	L3	L4	L1	L2	L3
Buprenorphine	µg/L	< 0.2	1	5	10	20	0.5	5	20
Norbuprenorphine	µg/L	< 0.2	2.5	5	10	25	1	5	20
Methadone	µg/L	< 2.0	10	50	100	200	25	100	200
EDDP	µg/L	< 2.2	10	50	100	200	25	100	200
6-MAM	µg/L	< 0.5	5	10	20	40	5	25	50
Morphine	µg/L	< 1.3	10	50	100	200	15	50	200
Codeine	µg/L	< 1.3	25	50	100	200	15	50	200
Dihydrocodeine	µg/L	< 1.1	25	100	300	500	50	200	500
Order Information			REF	REF	REF	REF	REF	REF	REF
5 x 2.0 ml (vials)		Level 0: Available only in set.	--	--	--	--	56VL01FC	56VL02FC	56VL03FC
10 x 2.0 ml (vials)			56SL01FF	56SL02FF	56SL03FF	56SL04FF	56VL01FF	56VL02FF	56VL03FF



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 + 49 (0)7157 / 5304 - 11
 info@medichem.de

Opioid Substitution Drugs II – Urine

2026-06

1.15

For quality monitoring of quantitative measurements by various chromatographic methods

Our reference materials are produced on the basis of human matrices. The highly accurate manufacturing occurs in a very gentle way. Analytical matrix effects are almost excluded. We achieve this by granting a maximal conformity of the products' matrix with the matrix of the patients' sample.

Medidrug® **OSD U**

(UP)LC-MS/(MS)

Lyophilized urine-based reference material for quality assurance of the determination of opioid substitution drugs.

The indicated target values are determined by independent accredited laboratories (EN ISO 17025); the analyses were performed according to the guidelines of the German Medical Association of Quality Assurance (RiliBÄK) and the guidelines of the GTFCh (Society of Toxicological and Forensic Chemistry in Germany).

Our reference material is available in different package sizes.

Medidrug® **Basis-line U**

Lyophilized reference material for base line determination in different applications or as negative control.

(All components in chapter 1.13 Blank Matrices).

Medidrug®		Urine					
Opioid Substitution Drugs		target values OSD U 8 analytes				target values Basis-line U 79 analytes (excerpt)	
Analyte	Unit	L0	L1	L2	L3	L4	Negative
Buprenorphine	µg/L	< 0.2	5	20	50	300	< LOD
Norbuprenorphine	µg/L	< 0.4	5	50	100	300	< LOD
Methadone	µg/L	< 2.5	45	90	200	500	< LOD
EDDP	µg/L	< 3.0	45	90	200	500	< LOD
6-MAM	µg/L	< 1.8	5	10	25	100	< LOD
Morphine	µg/L	< 1.9	10	25	100	500	< LOD
Codeine	µg/L	< 3.2	10	25	100	500	< LOD
Dihydrocodeine	µg/L	< 4.1	25	50	100	500	< LOD
Order Information		REF	REF	REF	REF	REF	REF
5 x 2.0 ml (vials)		Level 0: Available only in set.	56UL01FC	56UL02FC	56UL03FC	56UL04FC	
10 x 2.0 ml (vials)			56UL01FF	56UL02FF	56UL03FF	56UL04FF	
Set: 5 x 2 x 2.0 ml (vials)				56US01FF			
9 x 5 ml (vials)							40201
Lyophilisate							



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