

Drugs of Abuse I – Serum / Whole Blood **2022-05** **1.10**

For quality monitoring of quantitative measurements by chromatographic methods

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 have been verified 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).




These 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® **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 34 / 35 analytes			target values Basis-line S 91 analytes (excerpt)	target values DoA-I VB 34 / 35 analytes			target values Basis-line VB 70 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
Cannabinoids	CBD (Cannabidiol) -New-	µg/L	-/5 ¹⁾²⁾	-	-/100 ¹⁾²⁾	< LOD	-	-/25 ¹⁾²⁾	-	< LOD
	THC	µg/L	1	10	15	< LOD	1	10	15	< LOD
	11-OH-THC	µg/L	1	5	10	< LOD	1	5/10 ²⁾	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 ¹⁾	90 ¹⁾	150 ¹⁾	< LOD	25 ¹⁾	90 ¹⁾	150 ¹⁾	< LOD
	Methylone	µg/L	25/25 ¹⁾	90	150/150 ¹⁾	< LOD	25 ¹⁾	90 ¹⁾	150 ¹⁾	< LOD
Cocaine	Cocaine	µg/L	15	50	90	< LOD	15	50	90	< LOD
	Benzoylcegonin (BE)	µg/L	50	200	400	< LOD	50	200	400	< LOD
	Cocaethylene	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Ecgoninmethylester	µg/L	15 ¹⁾	50 ¹⁾	90 ¹⁾	< LOD	15	50	90	< LOD
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 (DHC)	µg/L	40	100	200	< LOD	40	100	200	< LOD
	Ethylmorphine	µg/L	35 ¹⁾ /40 ²⁾	90 ¹⁾	180 ¹⁾ /200 ²⁾	< LOD	35 ¹⁾	90 ¹⁾ /100 ²⁾	180 ¹⁾	< LOD
	Fentanyl	µg/L	1	5	10	< LOD	1	5	10	< LOD
	Norfentanyl	µg/L	1 ¹⁾ /1	5 ¹⁾	10 ¹⁾ /10	< LOD	1 ¹⁾	5 ¹⁾ /5	10 ¹⁾	< LOD
	Hydrocodone	µg/L	10 ¹⁾ /10	60 ¹⁾	100 ¹⁾ /100	< LOD	10	60	100	< LOD
	Hydromorphone	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Morphine	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Oxycodone	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Oxymorphon	µg/L	10	60	100	< LOD	10	60	100	< LOD
	Pholcodine	µg/L	25 ¹⁾	90 ¹⁾	150 ¹⁾	< LOD	25 ¹⁾	90 ¹⁾	150 ¹⁾	< LOD
	Tilidine	µg/L	25	90	135	< LOD	25	90	150	< LOD
	Nortilidine	µg/L	25	90	150	< LOD	25 ¹⁾	90 ¹⁾ /90	150 ¹⁾	< LOD
Tramadol	µg/L	50	100	200	< LOD	50	100	200	< LOD	
	o-Desmethyiltramadol	µg/L	100	200	400	< LOD	100	200	400	< LOD
Piperazines	Benzylpiperazine	µg/L	10 ¹⁾ /10	60 ¹⁾	100 ¹⁾ /100	< LOD	10	60	100	< LOD
der Information			REF	REF	REF	REF	REF	REF	REF	REF
10 vials à 2,5 ml Lyophilisate			24SL01GF / new lot	24SL02GF	24SL03GF / new lot	40151	24VL01GF	24VL02GF / new lot	24VL03GF	40161

1) Guide value; for more information, please request the CoA at info@medichem.de.
2) Analyte is only available in the new lot. / Changed concentration in the new lot.

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 information leaflet is valid.

All products conform to IVD Directive 98/79/EC
Certified quality management according to DIN EN ISO 9001:2015
DIN EN ISO 13485:2016

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Drugs of Abuse II – Hair **2021-09** **1.11**

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

Medidrug® **DoA 14 H-d, Level 0-6**

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

The unique quality of these 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 7 relevant concentration levels, prepared from one single, meticulously homogenized drug-free hair pool of cut European human hair. These divided lots have been spiked gravimetrically with 47 drugs of abuse and their metabolites and MPPH as additive:


- L0 Negative Control
- L1 Close to the limits of quantification or detection (method-dependent)
- L2-4 In the cut-off ranges of various international professional societies ♦
- L5-6 Elevated ranges

♦ EWDTS (The European Workplace Drug Testing Society), GTFCh (Gesellschaft für Toxikologische und Forensische Chemie), SFTA (Société Française de Toxicologie Analytique), SGRM (Schweizerische Gesellschaft für Rechtsmedizin), SoHT (Society of Hair Testing)

Medidrug®			Hair – spiked						
Drugs of Abuse			DoA 14 H-d						
			47 analytes						
Group	Analytes	Unit	L0	L1	L2	L3	L4	L5	L6
Amphetamines	Amphetamine	pg/mg	0	60,0	120	240	511	1110	2030
	MBDB	pg/mg	0	57,4*	115*	230*	489*	1060*	1940*
	MDA	pg/mg	0	60,2	121	241	513	1120	2030
	MDE(A)	pg/mg	0	60,1	120	241	512	1110	2030
	MDMA	pg/mg	0	60,4	121	242	515	1120	2040
	Methamphetamine	pg/mg	0	60,0	120	240	512	1110	2030
Benzodiazepines + Z-Drugs	Alprazolam	pg/mg	0	2,53	22,8	63,4	252	585	1060
	OH-Alprazolam	pg/mg	0	1,73*	15,6*	43,4*	173*	400*	728*
	7-Aminoclonazepam	pg/mg	0	2,38*	21,5*	59,7*	238*	552*	1000*
	7-Aminoflunitrazepam	pg/mg	0	2,38	21,5	59,6	237	551	1000
	Bromazepam	pg/mg	0	2,40	21,6	60,1	239	555	1010
	Diazepam (Valium)	pg/mg	0	2,39	21,6	60,0	239	554	1010
	Flunitrazepam	pg/mg	0	2,42	21,8	60,7	241	560	1020
	Lorazepam	pg/mg	0	2,38	21,5	59,6	237	550	1000
	Midazolam	pg/mg	0	2,46	22,2	61,6	245	568	1030
	Desmethyl(Nor-)diazepam	pg/mg	0	2,39	21,6	59,9	238	553	1010
	Oxazepam	pg/mg	0	2,38	21,5	59,7	238	552	1000
	Temazepam	pg/mg	0	2,38	21,5	59,6	237	550	1000
	Zolpidem	pg/mg	0	2,36*	21,3*	59,1*	235*	546*	994*
	Cannabinoides	THC	pg/mg	0	12,0	28,0	60,0	245	556
CBD (Cannabidiol)		pg/mg	0	24,0	55,9	120	253	558	1020
CBN (Cannabinol)		pg/mg	0	24,0	55,9	120	252	557	1020
Cocaine	THC-COOH **	pg/mg	0	6,00*	14,0*	30,0*	123*	278*	506*
	Anhydroecgonine methyl ester	pg/mg	0	25,3*	58,9*	126*	515*	1170*	2670*
	Benzoyllecgonine	pg/mg	0	23,7	55,3	118	486	1100	4990
	Cocaehtylene	pg/mg	0	24,2	56,3	120	492	1120	2550
	Cocaine	pg/mg	0	60,0	240	600	2417	5560	10100
	Ecgonine methyl ester	pg/mg	0	24,0	55,9	120	491	1110	5050
	Norcocaine	pg/mg	0	24,1	56,1	120	491	1110	2540
Hallucinogenes	Ketamine	pg/mg	0	24,2	56,3	121	493	1120	2550
	Norketamine	pg/mg	0	24,0*	55,8*	120*	488*	1110*	2530*
	LSD	pg/mg	0	6,27*	25,1*	62,7*	253*	581*	1060*
	Phencyclidine	pg/mg	0	27,7*	64,4*	138*	566*	1280*	5810*
Opioids	Codeine	pg/mg	0	60,0	120	240	512	1110	2030
	Dihydrocodeine	pg/mg	0	60,2	120	241	513	1120	2030
	Fentanyl	pg/mg	0	5,97	23,9	59,8	241	554	1010
	Hydromorphone	pg/mg	0	23,7*	55,3*	118*	250*	551*	1010*
	Morphine	pg/mg	0	59,0	118	236	503	1090	1990
	6-MAM	pg/mg	0	58,9	118	236	502	1090	1990
	Norfentanyl	pg/mg	0	0,59*	5,35*	14,9*	59,2*	137*	250*
	Oxymorphone	pg/mg	0	24,1	56,1	120	253	559	1020
	Tilidine	pg/mg	0	23,9*	55,6*	119*	251*	555*	1010*
	Tramadol	pg/mg	0	23,9	55,7	119	487	1100	2520
Substitution for Opioids	Buprenorphine	pg/mg	0	5,98*	23,9*	59,9*	241*	555*	1010*
	Norbuprenorphine	pg/mg	0	5,97*	23,9*	59,7*	241*	554*	1010*
	Metadone	pg/mg	0	60,4	121	242	515	1120	2040
Additive	EDDP	pg/mg	0	24,0	55,9	120	491	1110	5040
	MPPH	pg/mg	0	1053*	1054*	1009*	1054*	1017*	932*
Order Information			REF	REF	REF	REF	REF	REF	REF
1 x 100 mg (vial)			24HL00VA	24HL01VA	24HL02VA	24HL03VA	24HL04VA	24HL05VA	24HL06VA
1 mm cut			LOT	LOT	LOT	Sold	Sold	LOT	LOT

* Guide value; for more information, please request the CoA at info@medichem.de
 ** The concentrations for THC-COOH – which are too high – do not correspond to the normal measurement ranges.


Medidrug DoA H-d: You will find all information about the new lots on the next pages



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

The unique quality of these 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® DoA H-d, Level 0-5

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


Lot series of extremely homogeneous hair reference materials in 6 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). ♦

- ♦ EWDTS (The European Workplace Drug Testing Society)
- ♦ GTFCh (Gesellschaft für Toxikologische und Forensische Chemie)
- ♦ SFTA (Société Française de Toxicologie Analytique)
- ♦ SoHT (Society of Hair Testing)
- ♦ SSML (Société Suisse de Médecine Légale)



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	-New- pg/mg	0	70	140	270	650	1.800
	Phentermine	-New- pg/mg	0*	70*	140*	270*	650*	1.800*
Benzodiazepines + Z-Drugs	Alprazolam	pg/mg	0	2	24	60	240	960
	OH-Alprazolam	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	-New- pg/mg	0	2	24	60	240	960
	Diazepam (Valium)	pg/mg	0	2	24	60	240	960
	Desmethyldiazepam	pg/mg	0	2	24	60	240	960
	Flunitrazepam	pg/mg	0	2	24	60	240	960
	Flurazepam	-New- pg/mg	0*	2*	24*	60*	240*	960*
	Lorazepam	pg/mg	0	2	24	60	240	960
	Lormetazepam	-New- pg/mg	0*	2*	24*	60*	240*	960*
	Midazolam	pg/mg	0	2	24	60	240	960
	Nitrazepam	-New- pg/mg	0	2	24	60	240	960
	Nordiazepam	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	-New- pg/mg	0*	2*	24*	60*	240*	960*
Zolpidem	pg/mg	0	2	24	60	240	960	
Zopiclon	-New- 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	-New- pg/mg	0*	24*	60*	120*	600*	1.800*

* Guide value; for more information please request 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



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 information leaflet is valid.

All products conform to IVD Directive 98/79/EC
 Certified quality management according to DIN EN ISO 9001:2015
 DIN EN ISO 13485:2016

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Drugs of Abuse II – Hair

2021-08

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*	60*	120*	600*	1.800*
	Benzoylecgonine	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	-New- 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	-New- 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	-New- pg/mg	15	50	70	120	240	720
	Oxymorphone	pg/mg	0	24	60	120	240	720
	Pregabalin	-New- pg/mg	0*	12*	24*	120*	600*	1.800*
	Tilidine	pg/mg	0	24	60	120	240	720
	Nortilidine	-New- pg/mg	0	24	60	120	240	720
	Tapentadol	-New- pg/mg	0*	24*	60*	120*	240*	1.800*
	Tramadol	pg/mg	0	24	60	120	600	1.800
	N-Desmethyl-Tramadol	-New- pg/mg	0	24	60	120	600	1.800
	O-Desmethyl-cis-Tramadol	-New- pg/mg	0	24	60	120	600	1.800
Substitution for Opioids	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-N
1 mm cut								

* Guide value; for more information please request the CoA at info@medichem.de



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For quality monitoring of quantitative measurements by chromatographic methods

These 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

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 have been verified by independent accredited laboratories.

Medidrug® Basis-line U

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 59 analytes		target values Basis-line U 71 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Alcohols	Ethyl glucuronide	µg/L	75	125	< LOD
	Ethyl sulfate ²⁾	µg/L	75*	125*	< LOD
Amphetamines	Amphetamine	µg/L	37,5	62,5	< 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	37,5	62,5	< LOD
Barbiturates	Phenobarbital ²⁾	µg/L	22,5*	37,5*	< LOD
	Secobarbital ²⁾	µg/L	22,5*	37,5*	< LOD
Benzodiazepines and Z-Drugs	Alprazolam ²⁾	µg/L	37,5	62,5	< LOD
	OH-Alprazolam	µg/L	37,5	62,5	< LOD
	Bromazepam	µg/L	37,5	62,5	< LOD
	OH-Bromazepam	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
	Desmethyldiazepam	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	
Cannabinoid	THC-COOH	µg/L	7,5	12,5	< LOD
Cathinones	Mephedrone ²⁾	µg/L	37,5*	62,5*	< LOD
	Methylendioxypropylvalerone (MDPV) ²⁾	µg/L	37,5*	62,5*	< LOD

^{1) 2)} **CTU**: Chemical-toxicological analysis: Evaluation for driving fitness (guidelines DGVP & DGVM in Germany)

* Guide value; for more information please request 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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All products conform to IVD Directive 98/79/EC
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Drugs of Abuse III – Urine

2021-08

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 59 analytes		target values Basis-line U 71 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Cocaine	Benzoylecgonine	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*	-
	Fentanyl	µg/L	7,5	12,5	< LOD
	Norfentanyl	µg/L	7,5	12,5	< LOD
	Hydromorphone ²⁾	µg/L	37,5	62,5	< LOD
	Morphine	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	
Substitution for Opioids	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
Order Information			REF	REF	REF
12 vials à 3 mL			26U Q01 HL	26U Q02 HL	40201
Lyophilisate					

¹⁾²⁾ **CTU**: Chemical-toxicological analysis: Evaluation for driving fitness (guidelines DGVP & DGVM in Germany)* Guide value; for more information please request the CoA at info@medichem.de

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For quality monitoring of quantitative measurements by chromatographic methods

These 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

Lyophilized urine control, prepared from human urine containing drugs and medicaments. 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 have been verified by independent accredited laboratories.

Medidrug® Basis-line U

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 59 analytes		target values Basis-line U 71 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	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
	OH-Alprazolam ²⁾	µg/L	75	125	< LOD
	Bromazepam	µg/L	75	125	< LOD
	OH-Bromazepam ²⁾	µg/L	75	125	< LOD
	Clonazepam	µg/L	75	125	< LOD
	7-Aminoclonazepam ²⁾	-New- µg/L	75*	125*	< LOD
	Diazepam	µg/L	75	125	< LOD
	Desmethildiazepam	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	
Cannabinoid	THC-COOH	µg/L	11,25	18,75	< LOD
Cathinones	Mephedrone ²⁾	µg/L	150	250	< LOD
	Methylenedioxypropylvalerone (MDPV) ²⁾	µg/L	150	250	< LOD

^{1) 2)} **EWDTs**: European Workplace Drug Testing Society – 2015 European Guidelines for Workplace Drug Testing in Urine (pp 37-40)

* Guide value; for more information please request 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 III – Urine

2021-07

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 59 analytes		target values Basis-line U 71 analytes (excerpt)
Group	Analyte	Unit	Cut-off -25%	Cut-off +25%	Negative
Cocaine	Benzoyllecgonine	µg/L	75	125	< LOD
	Ecgonin methyl ester	µg/L	75	125	< LOD
Hallucinogens	Ketamine ²⁾	µg/L	150	250	< LOD
	LSD	µg/L	0,75	1,25	< 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*	-
	Fentanyl ²⁾	µg/L	7,5	12,5	< LOD
	Norfentanyl ²⁾	-New- µg/L	7,5	12,5	< 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
	Oxycodone ²⁾	µg/L	75	125	< LOD
	Oxymorphone ²⁾	µg/L	75	125	< LOD
	Pregabalin	µg/L	750	1.250	< LOD
	Propoxyphene	µg/L	225	375	< LOD
	Tilidine ²⁾	µg/L	150	250	< LOD
	Nortilidine ²⁾	-New- µg/L	75	125	< LOD
	Tramadol ²⁾	µg/L	75	125	< LOD
O-Desmethyltramadol ²⁾	-New- µg/L	75	125	< LOD	
Substitution for Opioids	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
Order Information			REF	REF	REF
12 vials à 3 mL			27U Q01 HL	27U Q02 HL	40201
Lyophilisate					

¹⁾²⁾ EWDTs: European Workplace Drug Testing Society – 2015 European Guidelines for Workplace Drug Testing in Urine (pp 37-40)* Guide value; for more information please request the CoA at info@medichem.de

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For quality monitoring of quantitative measurements

These 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® **Basis-line H**

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

Medidrug® **Basis-line S / U / VB**

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

GC-MS, HPLC, LC-MS

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	71 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			Phenobarbital, Secobarbital	
Benzodiazepines / Z-Drugs / Thienodiazepines	Alprazolam, Bromazepam Clobazam, N-Desmethyloclobazam, Clonazepam, 7-Aminoclonazepam, Demoxepam, Diazepam, Desmethyldiazepam 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, Desmethyloclobazam, Clonazepam, 7-Aminoclonazepam, Demoxepam, Diazepam, Desmethyldiazepam, Etizolam Flunitrazepam, 7-Aminoflunitrazepam, Desmethyflunitrazepam, Flurazepam, Desalkylflurazepam, Lorazepam, Lormetazepam, Midazolam, α-Hydroxymidazolam, 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-Desmethyldiazepam Flunitrazepam, 7-Aminoflunitrazepam, N-Desmethyflunitrazepam, 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) Chlordiazepoxide, Clobazam, Desmethyloclobazam, Clonazepam, 7-Aminoclonazepam, Demoxepam, Diazepam, Desmethyldiazepam, Etizolam Flunitrazepam, 7-Aminoflunitrazepam, Desmethyflunitrazepam, Flurazepam, Desalkylflurazepam, Lorazepam, Lormetazepam, Midazolam, 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	THC-COOH	CBD (Cannabidiol), THC, 11-OH-THC, THC-COOH
Cathinones		Mephedrone, Methedrone, Methylone	Mephedrone, MDPV (Methylenedioxypropylvalerone)	Mephedrone, Methedrone, Methylone
Cocaine	Cocaine, Norcocaine, Benzoylecgonine, Cocaethylene, Ecgonine methyl ester, Anhydroecgonine methyl ester	Cocaine, Benzoylecgonine, Cocaethylene, Ecgonine methyl ester	Cocaine, Benzoylecgonine, Ecgonine methyl ester	Cocaine, Benzoylecgonine, 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, 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, Norfentanyl, Morphine, Morphin-3-β-D-glucuronide, Hydromorphone Oxycodone, Oxymorphone, Pregabalin, Propoxyphen 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
Order Information	REF Vial à 100 mg: 00HL00VA Vial à 300 mg: 00HL00XA 1-mm-cut	REF 40151 10 vials for 2,5 mL Lyophilisate	REF 40201 9 vials for 5 mL Lyophilisate	REF 40161 10 vials for 2,5 mL Lyophilisate



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Clinical and Forensic Toxicology

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REF	Product	Unit	€	REF	Product	Unit	€
1.10 Drugs of Abuse I – Serum and Whole Blood							
24SL01GF	Medidrug® DOA-I S low	10 x 2.5 mL	280,00				
24SL02GF	Medidrug® DOA-I S mid	10 x 2.5 mL	280,00				
24SL03GF	Medidrug® DOA-I S high	10 x 2.5 mL	280,00				
24VL01GF	Medidrug® DOA-I VB low	10 x 2.5 mL	290,00				
24VL02GF	Medidrug® DOA-I VB mid	10 x 2.5 mL	290,00				
24VL03GF	Medidrug® DOA-I VB high	10 x 2.5 mL	290,00				
40151	Medidrug® Basis-line S (neg.)	10 x 2.5 mL	110,00				
40161	Medidrug® Basis-line VB (neg.)	10 x 2.5 mL	130,00				

1.11 Drugs of Abuse II – Hair (1-mm-cut)**Spiked Hair Samples**

24HL00VA	Medidrug® DOA (14) H-d L0	1 x 100 mg	🕒
24HL01VA	Medidrug® DOA (14) H-d L1	1 x 100 mg	🕒
24HL02VA	Medidrug® DOA (14) H-d L2	1 x 100 mg	🕒
24HL03VA	Medidrug® DOA H-d L3	1 x 100 mg	🕒
24HL04VA	Medidrug® DOA (14) H-d L4	1 x 100 mg	🕒
24HL05VA	Medidrug® DOA 14 H-d L5	1 x 100 mg	🕒
-NEW- 24HL05VA-N	Medidrug® DOA H-d L5 (New concentration)	1 x 100 mg	🕒
24HL06VA	Medidrug® DOA 14 H-d L6	1 x 100 mg	🕒

Authentic Hair Samples

00HL00VA	Medidrug® Basis-line H-a (neg.)	1 x 100 mg	🕒
00HL00XA	Medidrug® Basis-line H-a (neg.)	1 x 300 mg	🕒

1.12 Drugs of Abuse III – Urine

-NEW- 26UQ01HL	Medidrug® CTU Confirm U -25%	12 x 3 mL	390,00
-NEW- 26UQ02HL	Medidrug® CTU Confirm U +25%	12 x 3 mL	390,00
27UQ01HL	Medidrug® WDT Confirm U -25%	12 x 3 mL	399,00
27UQ02HL	Medidrug® WDT Confirm U +25%	12 x 3 mL	399,00
40201	Medidrug® Basis-line U (neg.)	9 x 5 mL	75,00

1.13 Blank Matrices – Hair, Serum, Urine and Whole Blood

00HL00VA	Medidrug® Basis-line H-a (neg.)	1 x 100 mg	🕒
00HL00XA	Medidrug® Basis-line H-a (neg.)	1 x 300 mg	🕒
40151	Medidrug® Basis-line S (neg.)	10 x 2.5 mL	110,00
40161	Medidrug® Basis-line VB (neg.)	10 x 2.5 mL	130,00
40201	Medidrug® Basis-line U (neg.)	9 x 5 mL	75,00

€ Price in Euro excl. VAT / taxes and delivery charges. We adjust our delivery charges each quarter.

🕒 Product / price available upon request

🔄 Product cancelled

▶ Product available while stock lasts – will be cancelled

LOT Product has been produced especially for an external quality control (proficiency testing). The catalogue code **REF** refers to a singular lot (batch). After expiry of the validity or being sold out it is no longer available. If possible new lots with similar compositions of components will be offered with a different catalogue code.