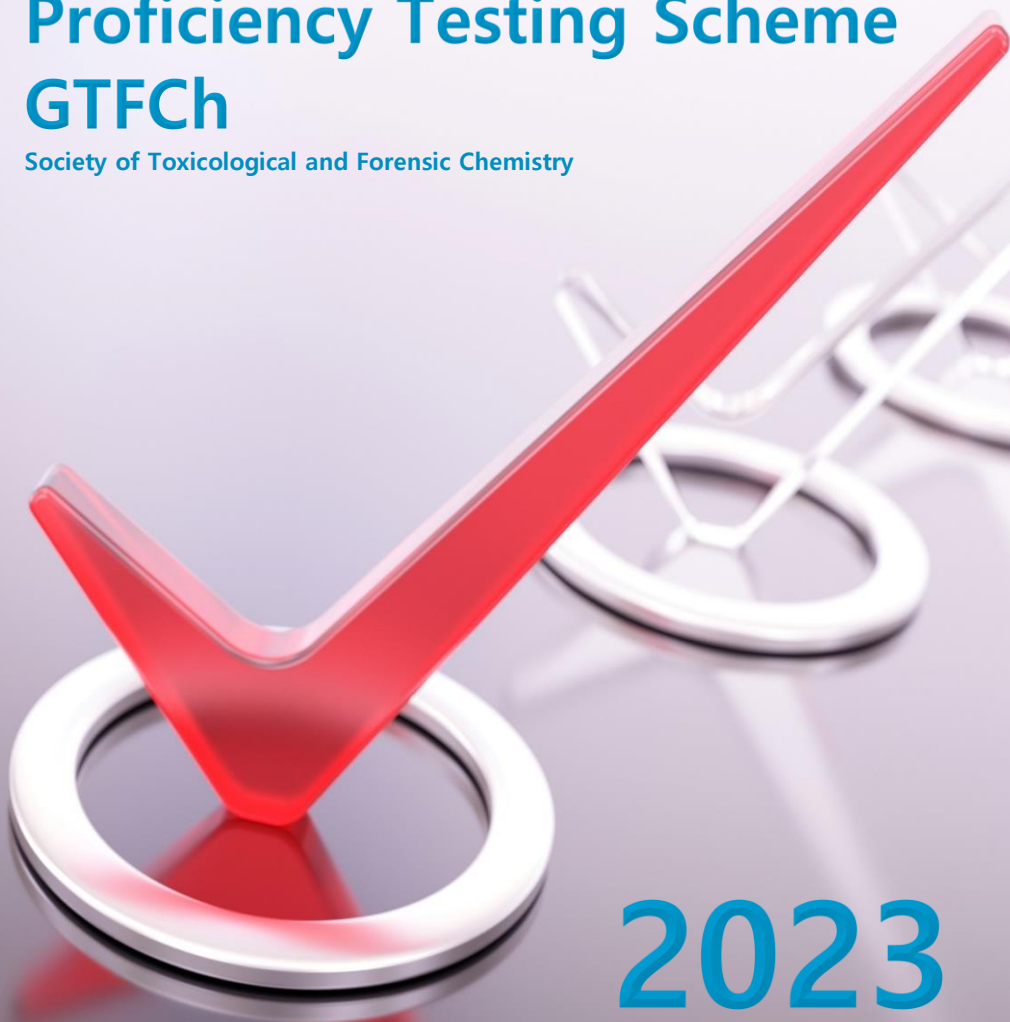


Proficiency Testing Scheme GTFCh

Society of Toxicological and Forensic Chemistry



2023

Proficiency Testing Scheme 2023

Organised by ARVECON GmbH on behalf of the GTFCh



Drugs of Abuse

BTMF - Drugs in Serum	6
UF - Drugs in Urine	7
SFD - Toxicological Analysis for Driver Fitness Determination	8
DHF - Drugs in Hair	9
DMS - Drug Screening in Hair	10
QSA - Qualitative Screening Analysis	11
GHB - GHB in Serum and Urine	12
SAL - Drugs in Saliva	13

Therapeutic Drug Monitoring

BZF - Benzodiazepines and Z-drugs in Serum	14
STM - Replacement Drugs in Serum and Urine	16
TCA - Tricyclic Antidepressants in Serum	17
TAB - Toxicological Analysis of Diagnostics of Brain Death	18
TDMA - Neuroleptics 1	20
TDMB - Anticonvulsants	21
TDMC - Neuroleptics 2	22
TDMD - Antidepressants 1	23
TDME - Antidepressants 2	24

Alcohol

ETOH - Ethanol in Serum	25
AMF - Alcohol consumption markers in Serum	26
BGS - Congener Alcohols in Serum	27
ETG - Ethylglucuronide in Serum and Urine	28
EGH - Ethylglucuronide in Hair	29

Clinical Toxicology and Chemistry

ATU - Amanitin in Urine	30
MEP - Metanephrine in Plasma	31
NIC - Nicotine and Metabolites in Serum and Urine	32

Pilot / Arvecon Proficiency Tests

DOAB - Drug Screening in Blood	34
ETB - Ethanol in Blood	35
IDS - Immunological Drug Screening in Urine	36
PETH - Phosphatidylethanol in Blood	38

Miscellaneous

Annotations to the proficiency tests	41
Conditions of participation	42
Precision criteria	44
Contacts	47

NEW IN 2023

TCA – Tricyclic Antidepressants in Serum

Protriptyline is added to sample C and D instead of sample A and B.

DHF – Drugs in Hair

Synthetic cannabinoids are no longer part of the test.

Proficiency Testing Scheme

Dates

Prices

Details

DATES

BTMF 1/23	BTMF 2/23	BTMF 3/23
24-Jan – 06-Mar	30-May – 10-Jul	26-Sep – 06-Nov

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation BTMF 1-3/23)	11500	798,--	578,--	11550	285,--	255,--
Single participation						
BTMF 1/23	11100	325,--	236,--	11150	95,--	85,--
BTMF 2/23	11200	325,--	236,--	11250	95,--	85,--
BTMF 3/23	11300	325,--	236,--	11350	95,--	85,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

Sample A: lyophilized serum, 5 mL (2 x 2,5 mL)

Sample B: different tasks, such as the determination of DOA in whole blood or other current requirements. The sample volume is adapted to the respective requests. In BTMF 2/23, blood is used as a matrix for sample B

DETAILS

ANALYTES

Cannabinoids

Δ^9 -THC
11-nor- Δ^9 -Carboxy-THC
11-Hydroxy- Δ^9 -THC

Cocaine/metabolites

Cocaine
Benzoylecgonine
Ecgoninemethylester

Opiates

Morphine
MAM
Codeine
DHC

Amphetamines

Amphetamine
MDMA
MDE
MDA
Methamphetamine

The addition of further drugs from corresponding drug classes is possible. Their determination is optional.

CONCENTRATION RANGES

Cannabinoids 0–250 | Cocaine/metabolites 0–750 | Opiates 0–1000 | Amphetamines 0-1000

all concentrations given as $\mu\text{g/L}$

REQUESTS

Identification and quantitative determination of the analytes

DATES

UF 1/23	UF 2/23	UF 3/23
17-Jan – 20-Feb	09-May – 12-Jun	05-Sep – 09-Oct

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation UF 1-3/23)	12500	315,--	12550	159,--
Single participation				
UF 1/23	12100	125,--	12150	53,--
UF 2/23	12200	125,--	12250	53,--
UF 3/23	12300	125,--	12350	53,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT,

MATERIAL

Lyophilized urine, 2 x 10 mL

DETAILS

ANALYTES

5 to 8 DOA, drugs or their metabolites

REQUESTS

- Step 1: immunological tests incl. confirmation of positive results
 Step 2: general unknown analysis

DATES

SFD 1/23	SFD 2/23	SFD 3/23
17-Jan – 20-Feb	09-May – 12-Jun	05-Sep – 09-Oct

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation SFD 1-3/23)	15500	220,-	15550	81,-
Single participation				
SFD 1/23	15100	80,-	15150	27,-
SFD 2/23	15200	80,-	15250	27,-
SFD 3/23	15300	80,-	15350	27,-

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

Lyophilized urine, 10 mL

DETAILS

ANALYTES

The sample is prepared in accordance with the substance list of the assessment criteria for driver fitness determination including parent compounds, related substances (opiods, further active benzodiazepine substances, Z-drugs, amphetamines, and further amphetamine derivatives) including important products of metabolism.

TARGET ANALYTES	CONC. RANGES, [µg/L]
THC-COOH	10 - 150
Morphine, codeine, dihydrocodeine	25 - 500
Benzoyllecgonine	30 - 500
Amphetamine, methamphetamine, MDMA, MDEA, MDA	50 - 500
Methadone, EDDP	20 - 500
Nordiazepam, diazepam, oxazepam, hydroxy-alprazolam, hydroxy-bromazepam, bromazepam, 7-aminoflunitrazepam, lorazepam, zolpidem, zopiclone, zaleplone	50 - 1000
Ethylglucuronide	100 - 1000
Buprenorphine, norbuprenorphine, nortilidine, tilidine, oxycodone, tramadol, O-des-methyltramadol, fentanyl, norfentanyl	3 - 200

REQUESTS

Participation possible by:

1. Immunological analysis incl. quantitative confirmation analysis
2. Quantitative mass spectrometric analysis.

DATES

DHF 1/23	DHF 2/23	DHF 3/23
21-Feb – 27-Mar	06-Jun – 10-Jul	02-Oct – 06-Nov

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation DHF 1-3/23)	13500	420,--	13550	270,--
Single participation				
DHF 1/23	13100	168,--	13150	90,--
DHF 2/23	13200	168,--	13250	90,--
DHF 3/23	13300	168,--	13350	90,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A, B), each 250 mg powdered, human hair spiked with drugs

DETAILS

ANALYTES

<u>SAMPLE A</u>	<u>SAMPLE B</u>
THC	Oxycodone
CBN	Tramadol
CBD	Tilidine
THC-COOH	Fentanyl
Morphine	Diazepam
MAM	Nordiazepam
Codeine	Alprazolam
Amphetamine	Bromazepam
MDMA	Flunitrazepam
MDA	Oxazepam
MDE	Lorazepam
Cocaine	Ketamine
Benzoyllecgonine	Norketamine
Cocaethylene	Methadone
	EDDP
	Buprenorphine
	Norbuprenorphine

The addition of further analytes is possible, the determination is optional.

REQUESTS

Quantitative determination of the analytes. The results of both samples will be certified.

DATES

DMS 1/23	DMS 2/23
11-Apr – 08-May	29-Aug – 25-Sep

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation DMS 1-2/23)	16500	325,--	16550	90,--
Single participation				
DMS 1/23	16100	185,--	16150	45,--
DMS 2/23	16200	185,--	16250	45,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

1 or 2 samples, each 200 mg cut or powdered, made of drug user hair

DETAILS

ANALYTES

Different composition. The screening should include:

- THC
- morphine
- MAM
- amphetamine
- MDMA
- MDA
- cocaine
- benzoylecgonine

The presence of other analytes is possible.

REQUESTS

Quantitative determination of the analytes

DATES

QSA 1/23	QSA 2/23	QSA 3/23
31-Jan – 27-Feb	23-May – 19-Jun	05-Sep – 02-Oct

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation QSA 1-3/23)	14500	348,--	295,--	14550	180,--	165,--
Single participation						
QSA 1/23	14100	139,--	118,--	14150	60,--	55,--
QSA 2/23	14200	139,--	118,--	14250	60,--	55,--
QSA 3/23	14300	139,--	118,--	14350	60,--	55,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

sample A: serum, liquid, 5 mL
 sample B: urine, liquid, 10 mL

DETAILS

ANALYTE

One or more drugs, with toxicological case history

REQUESTS

1. Identification of the drugs
2. interpretation of the results

DATES

GHB 1/23	GHB 2/23	GHB 3/23
07-Feb – 27-Feb	06-Jun – 26-Jun	02-Oct – 23-Oct

PRICES

Serum And Urine Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation GHB 1-3/23)	17500	275,-	17550	180,-
Single participation				
GHB 1/23	17100	110,-	17150	60,-
GHB 2/23	17200	110,-	17250	60,-
GHB 3/23	17300	110,-	17350	60,-

Only Serum

Annual subscription 2023 (participation GHB 1-3/23)	18500	175,-	18550	105,-
Single participation				
GHB 1/23	18100	70,-	18150	35,-
GHB 2/23	18200	70,-	18250	35,-
GHB 3/23	18300	70,-	18350	35,-

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples, each 2 mL lyophilized serum; 2 samples, each 2 mL lyophilized urine

DETAILS

ANALYTES

Gamma hydroxybutyric acid (GHB)

REQUESTS

Quantification of the analyt

DATES

SAL 1/23	SAL 2/23
11-Apr – 08-May	12-Sep – 09-Oct

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation SAL 1-2/23)	19500	250,--	19550	90,--
Single participation				
SAL 1/23	19100	135,--	19150	45,--
SAL 2/23	19200	135,--	19250	45,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A + B), lyophilized saliva, each 1,0 mL

DETAILS

ANALYTES

Cannabinoids:	THC
Amphetamines:	amphetamine, MDMA, methamphetamine
Cocaine and metabolites:	cocaine, benzoylecgonine
Opiates/Opioides:	6-acetylmorphine, codeine, morphine, buprenorphine, norbuprenorphine methadone, EDDP
Benzodiazepines:	diazepam, nordiazepam, flunitrazepam, oxazepam

REQUESTS

Identification and quantitative determination of the analytes

DATES

BZF 1/23	BZF 2/23	BZF 3/23
10-Jan – 06-Feb	18-Apr – 15-May	22-Aug – 18-Sep

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Standard	GTFCh*
Annual subscription 2023 (participation BZF 1-3/23)	20500	365,--	300,--	20550	210,--	165,--
Single participation						
BZF 1/23	20100	146,--	120,--	20150	70,--	55,--
BZF 2/23	20200	146,--	120,--	20250	70,--	55,--
BZF 3/23	20300	146,--	120,--	20350	70,--	55,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

2 samples (A+B), lyophilized serum, each 3 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Sample A		Sample B	
Diazepam	200 - 2000	Flunitrazepam	10 - 25
Nordiazepam	200 - 1500	Norflunitrazepam	10 - 50
Bromazepam	50 - 250	7-Aminoflunitrazepam	10 - 70
Clonazepam	5 - 100	Oxazepam	250 - 1000
Temazepam	20 - 1000	Midazolam	50 - 250
Alprazolam	5 - 100	α -OH-Midazolam	50 - 250
Zolpidem	50 - 250	Lorazepam	20 - 300
Nitrazepam	20 - 200	Lormetazepam	1 - 25
		Zopiclone	10 - 100
		ACP	10 - 100

all concentrations given as $\mu\text{g/L}$

REQUESTS

Quantitative determination of the analytes

SAMPLE C

Sample C can be ordered additionally and completes the list of analytes of the A and B sample.

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation BZF 1-3/23)	21500	168,--	158,--	21550	90,--	75,--
Single participation						
BZF 1/23	21100	68,--	63,--	21150	30,--	25,--
BZF 2/23	21200	68,--	63,--	21250	30,--	25,--
BZF 3/23	21300	68,--	63,--	21350	30,--	25,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

One sample C, lyophilized serum, 3 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Sample C

Clobazam	30 - 300	3-OH-Bromazepam	25 - 200
Norclobazam	300 - 2500	7-Aminoclonazepam	10 - 75
Flurazepam	10 - 150	7-Aminonitrazepam	50 - 200
Desalkylflurazepam	25 - 100	α -OH-Alprazolam	10 - 75
Triazolam	2 - 30	Estazolam	50 - 250
α -OH-Triazolam	5 - 50	Medazepam	150 - 1000
Chlordiazepoxide	300 - 3500	Prazepam	200 - 800
Demoxepam	400 - 1000		

all concentrations given as $\mu\text{g/L}$

REQUESTS

Quantitative determination of the analytes

DATES

STM 1/23	STM 2/23	STM 3/23
10-Jan – 06-Feb	18-Apr – 15-May	22-Aug – 18-Sep

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation STM 1-3/23)	22500	263,-	225,-	22550	195,-	150,-
Single participation						
STM 1/23	22100	105,-	90,-	22150	62,-	47,-
STM 2/23	22200	105,-	90,-	22250	62,-	47,-
STM 3/23	22300	105,-	90,-	22350	62,-	47,-

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

Sample A: lyophilized serum, 2,5 mL

Sample B: lyophilized urine, 2,5 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Analyt	Serum	Urine
Buprenorphine	1 - 20	0,5 - 100
Norbuprenorphine	2 - 40	0,5 - 150
Methadone	10 - 800	10 - 1000
EDDP	10 - 800	10 - 1000

all concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

TCA 1/23	TCA 2/23	TCA 3/23	TCA 4/23
17-Jan – 13-Feb	18-Apr – 15-May	04-Jul – 31-Jul	10-Oct – 06-Nov

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation TCA 1-4/23)	23500	462,--	403,--	23550	300,--	260,--
Single participation						
TCA 1/23	23100	132,--	115,--	23150	75,--	65,--
TCA 3/23	23200	132,--	115,--	23250	75,--	65,--
TCA 3/23	23300	132,--	115,--	23350	75,--	65,--
TCA 4/23	23400	132,--	115,--	23450	75,--	65,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

4 samples (A, B, C, D), lyophilized serum, each 2,5 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Sample A/B	Sample C/D
Doxepine	Imipramine
Nordoxepine	Desipramine
Amitriptyne	Clomipramine
Nortriptyline	Norclomipramine
Trimipramine	Maprotiline
Opipramol	Desmethylmaprotiline
	Protriptyline

All analytes 10 - 1500 µg/L

REQUESTS

Quantitative determination of the analytes

DATES

TAB 1/23	TAB 2/23
07-Feb – 27-Feb	29-Aug – 18-Sep

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation TAB 1-2/23)	24500	235,--	24550	76,--
Single participation				
TAB 1/23	24100	120,--	24150	38,--
TAB 2/23	24200	120,--	24250	38,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples, lyophilized serum, each 2,5 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Thiopental	0,5 - 3,0
Pentobarbital	0,5 - 5,0
Phenobarbital	2,0 - 50,0
Methohexital	0,25 - 3,0
Etomidate	0,1 - 0,5
Propofol	2,0 - 8,0

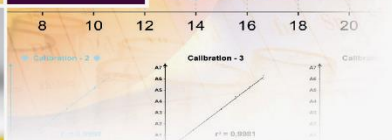
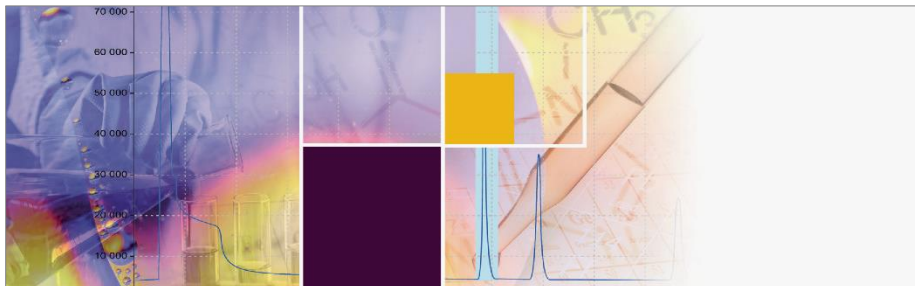
alle Angaben in mg/L

Midazolam	20,0 - 500,0
Diazepam	100,0 - 500,0
Nordiazepam	100,0 - 500,0
Fentanyl	1,0 - 10,0
Sufentanil	0,5 - 5,0
Pirtramide	3,5 - 14,0

all concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

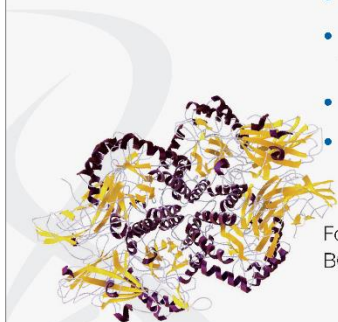


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DATES

TDMA 1/23	TDMA 2/23	TDMA 3/23
31-Jan – 27-Feb	16-May – 12-Jun	12-Sep – 09-Oct

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation TDMA 1-3/23)	25500	375,--	338,--	25550	240,--	210,--
Single participation						
TDMA 1/23	25100	150,--	135,--	25150	80,--	70,--
TDMA 2/23	25200	150,--	135,--	25250	80,--	70,--
TDMA 3/23	25300	150,--	135,--	25350	80,--	70,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

4 samples (A, B, C, D), lyophilized serum, each 4,0 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

SAMPLE A/B		SAMPLE C/D	
Clozapine	100 - 1500	Risperidone	1 - 15
N-Desmethyloclozapine	100 - 1500	Paliperidone*	5 - 150
Olanzapine	10 - 100	Perazine	25 - 600
Norolanzapine	10 - 100	Ziprasidone	10 - 150
Quetiapine	25 - 600	Levomepromazine	15 - 250
Norquetiapine	50 - 300	Promethazine	50 - 500
Amisulpride	50 - 500	Chlorprothixene	10 - 400
Thioridazine	50 - 300		

all concentrations given as µg/L

* 9-Hydroxyrisperidone

REQUESTS

Quantitative determination of the analytes

DATES

TDMB 1/23	TDMB 2/23	TDMB 3/23
14-Feb – 13-Mar	30-May – 26-Jun	26-Sep – 23-Oct

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation TDMB 1-3/23)	26500	355,--	315,--	26550	210,--	180,--
Single participation						
TDMB 1/23	26100	142,--	126,--	26150	70,--	60,--
TDMB 3/23	26200	142,--	126,--	26250	70,--	60,--
TDMB 3/23	26300	142,--	126,--	26350	70,--	60,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

2 samples (A, B), lyophilized serum, 4,0 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Carbamazepine	1 - 15
10-OH-Carbamazepine	5 - 50
Oxcarbazepine	5 - 50
Felbamate	15 - 100
Pregabalin	0,5 - 10
Gabapentine	1 - 30
Tiagabine	0,01 - 0,25
Levetiracetam	5 - 50
Topiramate	1 - 15
Vigabatrin	1 - 20
Lamotrigine	2 - 20
Lacosamide	1 - 20
Rufinamide	2 - 40
Zonisamide	5 - 60
Sultiam	2 - 8

all concentrations given as mg/L

REQUESTS

Quantitative determination of the analytes

DATES

TDMC 1/23	TDMC 2/23	TDMC 3/23
28-Feb – 27-Mar	13-Jun – 10-Jul	10-Oct – 06-Nov

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation TDMC 1-3/23)	27500	368,--	330,--	27550	210,--	180,--
Single participation						
TDMC 1/23	27100	147,--	132,--	27150	70,--	60,--
TDMC 2/23	27200	147,--	132,--	27250	70,--	60,--
TDMC 3/23	27300	147,--	132,--	27350	70,--	60,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

2 samples (A, B), lyophilized serum, each 4,0 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Aripiprazol	50 - 500
Dehydroaripiprazol	50 - 500
Flupenthixol	1,0 - 25
Fluphenazine	0,5 - 15
Haloperidol	1,0 - 25
Sertindol	25 - 150
Sulpiride	100 - 1000
Zotepine	10 - 250
Melperone	20 - 150
Pipamperone	50 - 500
Chlorpromazine	30 - 400
Prothipentyl	5 - 20
Zuclopenthixol	50 - 500

all concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

TDMD 1/23	TDMD 2/23	TDMD 3/23
14-Mar – 11-Apr	27-Jun – 24-Jul	24-Oct – 20-Nov

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation TDMD 1-3/23)	28500	355,--	315,--	28550	210,--	180,--
Single participation						
TDMD 1/23	28100	142,--	126,--	28150	70,--	60,--
TDMD 2/23	28200	142,--	126,--	28250	70,--	60,--
TDMD 3/23	28300	142,--	126,--	28350	70,--	60,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

2 samples (A, B), lyophilized serum, each 4,0 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Duloxetine	10 - 150	Reboxetine	25 - 350
Fluoxetine	25 - 500	Sertraline	10 - 250
Norfluoxetine	25 - 500	Venlafaxine	25 - 400
Fluvoxamine	25 - 250	Desmethylvenlafaxine	25 - 400
Mianserine	10 - 150	Citalopram	25 - 150
Mirtazapine	25 - 150	Trazodone	600 - 1200
Paroxetine	10 - 150		

all concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

TDME 1/23	TDME 2/23	TDME 3/23
28-Mar – 24-Apr	11-Jul – 07-Aug	07-Nov – 04-Dec

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation TDME 1-3/23)	29500	355,--	29550	210,--
Single participation				
TDME 1/23	29100	142,--	29150	70,--
TDME 2/23	29200	142,--	29250	70,--
TDME 3/23	29300	142,--	29350	70,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT,

MATERIAL

2 samples (A, B), lyophilized serum, each 4,0 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Bupropione	10 - 100
Hydroxybupropione	850 - 1500
Milnaciprane	50 - 125
Moclobemide	300 - 1000
Clomethiazol	100 - 5000
Dosulepine	45 - 100
Methylphenidate	10 - 25
Ritalinic acid	100 - 250
Atomoxetine	200 - 1000
Tianeptine	30 - 100
Tranylcypromine	10 - 50
Vilazodone	30 - 70
Vortioxetine	10 - 50

all concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

ETOH 1/23	ETOH 2/23	ETOH 3/23	ETOH 4/23
17-Jan – 06-Feb	11-Apr – 02-May	04-Jul – 24-Jul	03-Oct – 23-Oct

PRICES

Item	Proficiency Test			Add. samples		
	Order no.	Price	GTFCh*	Order no.	Price	GTFCh*
Annual subscription 2023 (participation ETOH 1-4/23)	31500	295,--	260,--	31550	200,--	140,--
Single participation						
ETOH 1/23	31100	84,--	74,--	31150	90,--	80,--
ETOH 3/23	31200	84,--	74,--	31250	90,--	80,--
ETOH 3/23	31300	84,--	74,--	31350	90,--	80,--
ETOH 4/23	31400	84,--	74,--	31450	90,--	80,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT, *price for members of GTFCh

MATERIAL

2 samples (A, B), liquid serum, each 2,5 mL

DETAILS

ANALYTES

Ethanol

REQUESTS

Quantitative determination with the GC and the ADH method according to the guidelines of the Federal Health Authority BGA or its current adaptation made by the German Forensic Society (DGRM), the German Society for Traffic Medicine (DGVM) and the Society for Toxicological and Forensic Chemistry (GTFCh).

As a permissible variation from a target concentration <1,000 g/kg of whole blood or 1,236 g/l of serum a maximum of $\pm 0,05$ g/kg (0,062 g/l) is valid, of a target concentration >1,000 g/kg of whole blood or 1,236 g/l of serum a maximum of $\pm 5\%$.

DATES

AMF 1/23	AMF 2/23	AMF 3/23	AMF 4/23
24-Jan – 20-Feb	02-May – 30-May	22-Aug – 18-Sep	07-Nov – 04-Dec

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation AMF 1-4/23)	32500	280,--	32550	168,--
Single participation				
AMF 1/23	32100	80,--	32150	42,--
AMF 2/23	32200	80,--	32250	42,--
AMF 3/23	32300	80,--	32350	42,--
AMF 4/23	32400	80,--	32450	42,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A, B), lyophilized serum, each 1,0 mL

DETAILS

ANALYTES

CDT

REQUESTS

Quantitative determination of the analyte

DATES

BGS 1/23	BGS 2/23
14-Mar – 11-Apr	05-Sep – 04-Oct

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation BGS 1-2/23)	33500	245,--	33550	130,--
Single participation				
BGS 1/23	33100	143,--	33150	65,--
BGS 2/23	33200	143,--	33250	65,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

Liquid serum, 1 x 2,5 mL

DETAILS

ANALYTES

Methanol
 Propan-1-ol
 Propan-2-ol
 2-Methylpropan-1-ol
 Butan-2-ol
 Butan-2-one
 Butan-1-ol
 2- u. 3-Methylbutan-1-ol

REQUESTS

Quantitative determination of the analytes

DATES

ETG 1/23	ETG 2/23	ETG 3/23
28-Feb – 27-Mar	20-Jun – 17-Jul	17-Oct – 13-Nov

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation ETG 1-3/23)	34500	300,--	34550	150,--
Single participation				
ETG 1/23	34100	120,--	34150	50,--
ETG 2/23	34200	120,--	34250	50,--
ETG 3/23	34300	120,--	34350	50,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

Sample A: lyophilized serum, 2,5 mL

Sample B: lyophilized urine, 2,5 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Ethylglucuronide, Ethylsulfate

Concentration ranges, mg/L

Sample A - serum: 0,1 - 5

Sample B - urine: 0,1 - 10

REQUESTS

Quantitative determination of the analytes

DATES

EGH 1/23	EGH 2/23	EGH 3/23
21-Feb – 20-Mar	06-Jun – 03-Jul	02-Oct – 30-Oct

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation EGH 1-3/23)	35500	290,--	35550	165,--
Single participation				
EGH 1/23	35100	116,--	35150	55,--
EGH 2/23	35200	116,--	35250	55,--
EGH 3/23	35300	116,--	35350	55,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A, B): each 100 mg powdered or cut, authentic human hair

DETAILS

ANALYTE

Ethylglucuronide

REQUESTS

Quantitative determination of the analyte

DATES

ATU 1/23	ATU 2/23
22-Aug – 11-Sep	17-Oct – 06-Nov

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation ATU 1-2/23)	41500	195,--	41550	76,--
Single participation				
ATU 1/23	41100	102,--	41150	38,--
ATU 2/23	41200	102,--	41250	38,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A, B), lyophilized urine, 1,2 mL

DETAILS

ANALYTE

α-Amanitin

REQUESTS

1. Quantitative determination of the analytes
2. Interpretation of the results

DATES

MEP 1/23	MEP 2/23	MEP 3/23
14-Feb – 13-Mar	06-Jun – 03-Jul	26-Sep – 23-Oct

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation MEP 1-3/23)	42500	210,--	42550	120,--
Single participation				
MEP 1/23	42100	75,--	42150	40,--
MEP 2/23	42200	75,--	42250	40,--
MEP 3/23	42300	75,--	42350	40,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A+B), lyophilized plasma, each 2,5 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Metanephrine: 50 – 500 ng/L

Normetanephrine: 50 – 750 ng/L

REQUESTS

Quantitative determination of the analytes

DATES

NIC 1/23	NIC 2/23
11-Apr – 08-May	12-Sep – 09-Oct

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation NIC 1-2/23)	43500	135,-	43550	80,-
Single participation				
NIC 1/23	43100	69,-	43150	40,-
NIC 2/23	43200	69,-	43250	40,-

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

Sample A, lyophilized serum, each 2.5 mL
 Sample B, lyophilized urine, each 2.5 mL

DETAILS

ANALYTES AND CONCENTRATION RANGES

Nicotine:	5 - 5000 µg/L
Cotinine:	5 - 8000 µg/L
3-OH-Cotinine:	25 - 25000 µg/L
Anabasine:	2 - 500 µg/L

REQUESTS

Quantitative determination of the analytes

Pilot Proficiency Tests and Proficiency Tests of Arvecon

Pilot proficiency tests serve the preparation of new proficiency tests. In these tests, the suitability of the composition of the sample material and the sample quantity are tested and optimised. The quality and scope of the incoming results are examined, evaluated and included in the preparation of a suitable result report. Based on these findings, necessary adjustments to the design of the proficiency tests may be necessary at short notice during the course of the year. In addition to the GTFCh, the elaboration of the concepts also partly takes place with other suitable scientific and technical partners.

DATES

DOAB 1/23	DOAB 2/23	DOAB 3/23	DOAB 4/23
07-Feb – 06-Mar	09-May – 05-Jun	22-Aug – 18-Sep	07-Nov – 04-Dec

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation DOAB 1-4/23)	52500	683,--	52550	200,--
<u>Single participation</u>				
DOAB 1/23	52100	195,--	52150	50,--
DOAB 2/23	52200	195,--	52250	50,--
DOAB 3/23	52300	195,--	52350	50,--
DOAB 4/23	52400	195,--	52450	50,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A, B), lyophilized whole blood, each 2,5 mL

DETAILS**ANALYTES**

Aim of the proficiency test is the determination of blood samples for the listed drugs and the quantitative determination of the detected drugs. Each sample contains 0 to 10 analytes.

Table of analytes

Δ^9 -THC	Amphetamin
11-nor- Δ^9 -Carboxy-THC	MDMA
11-Hydroxy- Δ^9 -THC	MDE
Morphine	MDA
MAM	Methamphetamine
Codeine	Ketamine
DHC	Norketamine
Cocaine	Buprenorphine
Benzoylcegonine	Norbuprenorphine
Ecgoninemethylester	Methadone
Cocaethylene	EDDP

all concentrations given as $\mu\text{g/L}$

REQUESTS

Identification and quantitative determination of the detected drugs.

DATES

ETB 1/23	ETB 2/23	ETB 3/23	ETB 4/23
24-Jan – 13-Feb	25-Apr – 15-May	11-Jul – 31-Jul	10-Oct – 30-Oct

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation ETB 1-4/23)	53500	294,-	53550	200,-
<u>Single participation</u>				
ETB 1/23	53100	84,-	53150	50,-
ETB 2/23	53200	84,-	53250	50,-
ETB 3/23	53300	84,-	53350	50,-
ETB 4/23	53400	84,-	53450	50,-

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A+B), liquid whole blood, each 2,5 mL

DETAILS

ANALYTES

Ethanol

REQUESTS

Quantitative determination with GC- and/or ADH method

Accepted deviation from the target value:

- 1.) $\leq 1,0 \text{ g/kg} \pm 0,05 \text{ g/kg}$
- 2.) $> 1,0 \text{ g/kg} \pm 5\%$

DATES

IDS 1/23	IDS 2/23	IDS 3/23	IDS 4/23
24-Jan – 20-Feb	02-May – 30-May	22-Aug – 18-Sep	07-Nov – 04-Dec

PRICES

Item	<u>Proficiency Test</u>		<u>Add. samples</u>	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation IDS 1-4/23)	51500	298,-	51550	100,-
<u>Single participation</u>				
IDS 1/23	51100	85,-	51150	25,-
IDS 2/23	51200	85,-	51250	25,-
IDS 3/23	51300	85,-	51350	25,-
IDS 4/23	51400	85,-	51450	25,-

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

Lyophilized urine, 3 mL

DETAILS

ANALYTES

Aim of the proficiency test is the determination of urine samples with immunological methods for the listed drug classes and analytes. Qualitative and if possible quantitative results should be reported as well as the applied cut-off values.

Drug classes

- | | |
|--|---|
| <ul style="list-style-type: none"> - Amphetamines - Methamphetamines - Benzodiazepines - Cannabinoids - Cocaine/metabolites - Opiates - Methadone/metabolites | <ul style="list-style-type: none"> - Barbiturates - Synthetic Cannabinoids - Tricyclic Antidepressants - Buprenorphine/metabolites - Nicotin/metabolites - LSD/metabolites - Methylphenidate/metabolites |
|--|---|

Analytes

- | | |
|---|---|
| <ul style="list-style-type: none"> - Methadone - EDDP - MDMA (Ecstasy) - 6-Monoacetylmorphine - Carisoprodol (Meprobamate) - Ethylglucuronide - Fentanyl | <ul style="list-style-type: none"> - Gabapentine - Ketamine - Oxycodone - Phencyclidine (PCP) - Pregabalin - Tramadol - Zolpidem |
|---|---|

REQUESTS

Qualitative determination of the analytes



Accuracy controls



Simplifying Phosphatidylethanol (PEth) Analysis

ACQ Science is the 1st company to provide quality controls for the determination of the direct alcohol marker PEth

- QC material for a broad range of analytical methods to meet the increasing demand for PEth analysis
- Whole blood controls spiked with PEth 16:0/18:1 isoform (target values at 40 and 300 ng/mL) currently on stock
- Controls and standards tailored to customer-specific concentration requirements
- Stable, lyophilized material, shelf life up to 5 years
- Together with HemoXis™, ACQ Science offers integrated solutions for quality control and sample collection to streamline PEth analysis



For more information please contact us at info@acq-science.de
HemoXis™ is a trademark of DBS System SA - for more information, visit www.hemaxis.com

Certified according to
EN ISO 9001
EN ISO 13485

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DATES

PETH 1/23	PETH 2/23
25-Apr – 22-May	19-Sep – 16-Oct

PRICES

Item	Proficiency Test		Add. samples	
	Order no.	Price	Order no.	Price
Annual subscription 2023 (participation PETH 1-2/23)	57500	190,--	57550	110,--
Single participation				
PETH 1/23	57100	100,--	57150	55,--
PETH 2/23	57200	100,--	57250	55,--

all prices in EUR, incl. standard shipping costs (see p.43), plus 19% VAT

MATERIAL

2 samples (A, B), lyophilized blood, each 500 µL (authentic or spiked samples)

DETAILS

ANALYTES

Phosphatidylethanol (PhEth – 16:0/18:1)

REQUESTS

Quantitative determination of the analyte



1. All laboratories working in the field of forensic or clinical toxicology or related fields may participate.
2. If not stated otherwise in the requests regarding the proficiency test no special methods for analysis are prescribed.
3. Enrolment for participation is possible up to the beginning of the proficiency test. Later enrolments are only possible on request.
4. Enrolment may be by subscription or for an individual test.
5. The results of the proficiency tests may be submitted by post, fax, e-mail or per internet.
6. The results have to be submitted up to the scheduled delivery date. If the results arrive too late, the participant receives a report of results without his own results.
7. The analyses correspond to acknowledged scientific criteria which are supervised by accompanying working groups and/or expert groups.
8. The participants receive their reports of results by post. In case of an incorrect analysis the participants in question are entitled to receive a corrected report. Further claims do not exist.
9. Incorrect entries in the result forms may be corrected only up to the deadline of the respective proficiency test. Subsequent corrections are not possible.
10. If a proficiency test cannot take place, already paid participation fees will be refunded.

1. PERIODS FOR REGISTRATION

To guarantee a punctual process of the proficiency tests, it is necessary that the results are submitted to ARVECON up to the indicated deadline. This also applies to results sent by post. Therefore, we kindly ask you to submit your post in time or to report us your results in advance by fax or internet about your results. We recommend to transmit the results by entering them in the formula on our homepage, because only then you will receive an additional confirmation of receipt by automatic reply.

2. RESULT FORMS

All result forms and reports are available in German and English. The participants coming from a non-German speaking country automatically receive the English version of all forms. Change requests have to be indicated on the registration form or communicated separately to ARVECON.

3. REPORTING OF THE RESULTS

All handwritten entries have to be made carefully and legible. Errors which are caused by a bad legibility of the entries cannot be corrected subsequently. All handwritten entries have to be made carefully and legible. Errors which are caused by a bad legibility of the entries cannot be corrected subsequently.

4. RECLAMATIONS

If you should detect errors in the analysis or the certificate after having received the results of the proficiency tests, we kindly ask you to immediately inform ARVECON. If the error has been caused by yourself by a wrong transmission of the data, according to the decision of the board of the GTFCh, no subsequent error correction is possible, even when submitting the analysis documents.

5. CORRESPONDENCE

All written requests (e-Mail, post) to ARVECON can be made in German, English or French. Unfortunately, requests made in other languages can not be dealt with.

6. EVALUATION TIME

At the moment, the period of analysis of the proficiency tests comes to approx. 4 weeks.

7. SAMPLES OF PROFICIENCY TESTS

The management and the organizers of the proficiency tests may change the ingredients and the volume of the samples used for proficiency tests if this proves to be favourable and/or necessary.

8. DISPATCH OF THE SAMPLES (EUROPE)

Normally, the samples are dispatched five days before starting the proficiency test. For the dispatch of the samples, delivery periods of up to eight days are included into the processing time of the respective proficiency test. If the samples arrive later, the organizer of the proficiency test has to be contacted to agree upon an extension of the period for registration.

9. DISPATCH OF THE SAMPLES (OUTSIDE EUROPE)

Shipment outside Europe is performed by express service. The costs will be charged separately.

Fee per shipment:	North America	EUR 35,-
	Asia, Africa	EUR 45,-

10. PRICES

All prices stated for the proficiency tests are net prices plus the legally prescribed value added tax. Packaging and standard shipping are included in the prices.

11. TYPES OF PAYMENT

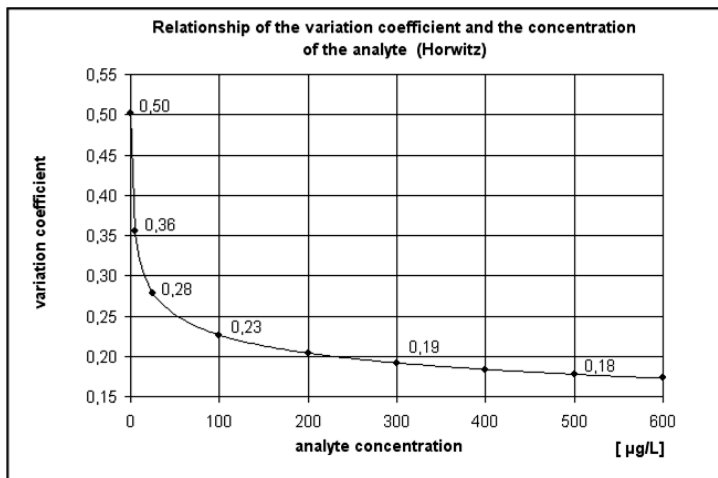
After billing, currently only payment by transfer is possible. Payment by credit card is currently not possible.

By means of the GTFCh proficiency tests for the quantitative determination of single analytes it is possible to analyse and represent the accuracy of measurement actually to be reached according to the respective state of analysis technology in an interlaboratory comparison. Besides, the proficiency tests offer the laboratories both support and clues regarding the improvement and control as well as a forum to represent the own analytical performance.

In 1982, Horwitz [1] found out by means of 150 proficiency tests carried out independently of each other that the coefficient of variation is to be represented on average as a function of concentration:

$$VC = 2 \cdot (1 - 0.5 \log C)$$

VC = variation coefficient (%), C = concentration of the analytes as kg/L!



The standard deviation between the preferred concentration range.

Analogous to the formula, the coefficient of variation is doubling if the concentration of the analyte drops by the factor 100 (see also figure above). These now more than 30 years old data have been determined in different ranges of concentration with various analytes and five different analysis techniques, namely chromatography, AAS, spectrometry, polarography, and bioassays. As regards the 'Horwitz function' it is indicated that it is independent of samples, analytes, and methods. However, because of improvements made in the analysis technique and considering the current results of proficiency tests, there are justifiable doubts regarding its general validity. Both the detection limit and the limit of determination of a measuring method are not considered in the Horwitz function. Today, in the course of the indispensable validation of analysis techniques and with the help of user-friendly EDP programmes, these limits may also be determined at every new calibration during the laboratory

routines. It is not rare that measured values being between the limit of determination and the detection limit are communicated, though in this range the quantitative determination should not be indicated any more because of the increasing measurement uncertainty to be determined statistically. Nevertheless, the coefficients of variation deduced from the equation proved to be a suitable standard to assess the efficiency at single analysis techniques or in the interlaboratory comparison. Another possibility to evaluate the results of proficiency tests is to analyse the submitted data according to DIN ISO 5725 [2]. The standard deviation of reproducibility to be calculated according to DIN ISO 5725 is only depending on the efficiency of the participants in the proficiency test. In case of stronger diverging data pools this leads to an extension of the evaluation limits compared with the Horwitz method [3]. To calculate the evaluation limits, the method according to DIN ISO 5725 requires, however, a multiple determination (at least two independent measured values) of the analyte.

Literature:

- [1] HORWITZ W (1982)
Evaluation of analytical methods used for regulation of foods and drugs. Anal Chem 54 (1): 67A -76A
- [2] DIN ISO 5725 (1994)
International Organization for Standardization. Genauigkeit (Richtigkeit und Präzision) von Messverfahren und Messergebnissen. ISO Central Secretariat, 1, rue de Varamba, CH 1211 Genf 20, Schweiz
- [3] Herbold M, Schmitt G, Aderjan R (2003)
Auswertung forensischer Ringversuche nach ISO 5725, Beispiel: Haare – Ringversuche 2002. In: Symposium der GTFCh, Mosbach/Baden, Hrsg.: F. Pragst, R. Aderjan, Dr. Dieter Helm Verlag, Heppenheim



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