

Proficiency Testing Scheme GTFCh

Society of Toxicological and Forensic Chemistry

2027

Proficiency Testing Scheme 2027

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CHANGES IN 2027

DHF-PROFICIENCY TEST

Norcocaine is included as an additional target analyte in sample A.

PILOT PROFICIENCY TESTS (P)

Pilot proficiency testing serves to prepare for new tests. These proficiency tests examine and optimize the suitability of the sample material composition and the sample quantity. The quality and scope of the incoming results are reviewed and evaluated and included in the preparation of a suitable results report. Based on these findings, it may be necessary to make adjustments to the design of the proficiency tests at short notice during the course of the year. These tests are marked with a (P).

PROFICIENCY TESTS BY ARVECON (A)

Some concepts for proficiency testing were developed in collaboration with other scientific or technical partners who have the relevant expertise. These tests are marked with an (A).

DISCOUNT FOR GTFCh MEMBERS

Members of the GTFCh benefit from reduced prices for some proficiency tests. These are listed in the “GTFCh” column.

SPECIFIED CONCENTRATION RANGES

The concentration ranges specified in the test manual correspond to the ranges in which the analytes are typically present. However, in the context of forensic investigations, the analytes may occasionally be detectable even at very low concentrations or within the toxic concentration range.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
BTMF 1/27	29 January	02 February	15 March
BTMF 2/27	21 May	25 May	05 July
BTMF 3/27	17 September	21 September	02 November

PRICES

	Order no.	Price	GTFCh	ADDITIONAL SAMPLES		
				Order no.	Price	GTFCh
Annual subscription 2027*	1.11.500	875,-	645,-	1.11.550	309,-	279,-
BTMF 1/27	1.11.100	350,-	258,-	1.11.150	103,-	93,-
BTMF 2/27	1.11.200	350,-	258,-	1.11.250	103,-	93,-
BTMF 3/27	1.11.300	350,-	258,-	1.11.350	103,-	93,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

For the analytes amphetamine and methamphetamine, it is possible to perform a chiral analysis. In addition to the total concentration, the respective concentrations of the enantiomers are also evaluated and certified. In addition, **papaverine** and/or **noscapine** are added to test for the use of street heroin.

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 the proficiency test BTMF 2/27 whole blood is used as matrix for the B-sample. The results of this sample are also certified.

ANALYTES

<u>Cannabinoids</u>	<u>Cocaine/Metabolites</u>	<u>Opiates</u>	<u>Amphetamines</u>
Δ ⁹ -THC	Cocaine	Morphine	Amphetamine
11-Nor-Δ ⁹ -carboxy-THC	Benzoylcegonine	MAM	MDMA
11-Hydroxy-Δ ⁹ -THC	Ecgonine methylester	Codeine	MDE
	Cocaethylene	DHC	MDA
			Methamphetamine

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

CONCENTRATION RANGES

Cannabinoids 0–250 | Cocaine/Metabolites 0–1500 | Opiates 0–1000 | Amphetamines 0–1000

All concentrations given as µg/L

REQUESTS

Identification and quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
DOAB 1/27	12 February	16 February	15 March
DOAB 2/27	07 May	11 May	07 June
DOAB 3/27	13 August	17 August	13 September
DOAB 4/27	29 October	02 November	29 November

PRICES

	Order no. Price		ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	1.12.500	767,-	1.12.550	228,-
DOAB 1/27	1.12.100	219,-	1.12.150	57,-
DOAB 2/27	1.12.200	219,-	1.12.250	57,-
DOAB 3/27	1.12.300	219,-	1.12.350	57,-
DOAB 4/27	1.12.400	219,-	1.12.450	57,-

*The annual subscription includes participation in the 4 proficiency tests during 2027.

MATERIAL

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

ANALYTES

Δ^9 -THC	Dihydrocodeine	Amphetamine	Ketamine
11-nor- Δ^9 -Carboxy-THC	Cocaine	MDMA	Norketamine
11-Hydroxy- Δ^9 -THC	Benzoylecgonine	MDE	Buprenorphine
Morphine	Ecgonine methylester	MDA	Norbuprenorphine
MAM	Cocaethylene	Methamphetamine	Methadone
Codeine			EDDP

Aim of the proficinecy 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. Each analyte is tested twice a year

REQUESTS

Identification and quantitative determination of the detected drugs.

(A) The proficiency test is carried out under the organizational and scientific management of Arvecon GmbH.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
UF 1/27	22 January	26 January	01 March
UF 2/27	30 April	04 May	07 June
UF 3/27	27 August	31 August	04 October

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
	Order no.		Price		Order no.	
Annual subscription 2027*	1.13.500	343,-			1.13.550	174,-
UF 1/27	1.13.100	137,-			1.13.250	58,-
UF 2/27	1.13.200	137,-			1.13.350	58,-
UF 3/27	1.13.300	137,-			1.11.350	58,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

Lyophilized urine, 2 x 10 mL

ANALYTES

5 to 8 DOA, drugs or their metabolites.

REQUESTS

Step 1: immunological tests incl. confirmation of positive results (optional)

Step 2: general unknown analysis

DATES

	SAMPLE SHIPMENT	START	DEADLINE
SFD 1/27	22 January	26 January	01 March
SFD 2/27	30 April	04 May	07 June
SFD 3/27	27 August	31 August	04 October

PRICES

	Order no.		Price	ADDITIONAL SAMPLES	
				Order no.	Price
Annual subscription 2027*	1.14.500	223,-		1.14.550	87,-
SFD 1/27	1.14.100	89,-		1.14.150	29,-
SFD 2/27	1.14.200	89,-		1.14.250	29,-
SFD 3/27	1.14.300	89,-		1.14.350	29,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

Lyophilized urine, 10 mL

ANALYTES

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

TARGET ANALYTES	Concentration ranges, µg/L	¹ Cut-off values
THC-COOH	10 -150	7,5
Morphine, Codeine, Dihydrocodeine	25 – 500	25
Benzoylcegonine	30 – 500	20
Amphetamine, Methamphetamine, MDMA, MDE, MDA	50 – 500	30
Methadone, EDDP	20 – 500	30
Nordiazepam, Diazepam, Oxazepam, Hydroxy-Alprazolam, (Hydroxy-) Bromazepam, 7-Aminoflunitrazepam, Lorazepam, Zolpidem, Zopiclon	50 – 1000	50
Ethylglucuronide	100 – 1000	100
Buprenorphine, Norbuprenorphine	0,5 – 25	1
Nortilidine, Tilidine, Oxycodone, Tramadol, O-Desmethyltramadol, Fentanyl, Norfentanyl	3 – 200	50
Creatinine (quantitative determination)		

REQUESTS

Participation possible by:

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

DATES

	SAMPLE SHIPMENT	START	DEADLINE
IDS 1/27	29 January	02 February	01 March
IDS 2/27	30 April	04 May	31 May
IDS 3/27	13 August	17 August	13 September
IDS 4/27	29 October	02 November	29 November

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
	Order no.		Price		Order no.	Price
Annual subscription 2027*	1.15.500		329,-		1.15.550	116,-
IDS 1/27	1.15.100		94,-		1.15.150	29,-
IDS 2/27	1.15.200		94,-		1.15.250	29,-
IDS 3/27	1.15.300		94,-		1.15.350	29,-
IDS 4/27	1.15.400		94,-		1.15.450	29,-

*The annual subscription includes participation in the 4 proficiency tests during 2027.

MATERIAL

Lyophilized urine, 3 mL

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 qualitative results should be reported as well as the applied cut-off values.

DRUG CLASSES

- Amphetamines
- Barbiturates
- Methamphetamines
- Synthetic cannabinoids
- Benzodiazepines
- Tricyclic antidepressants
- Cannabinoids
- Buprenorphine/metabolites
- Cocaine/metabolites
- Nicotine/metabolites
- Opiates
- LSD/metabolites
- Methadone/metabolites
- Methylphenidate/metabolites

ANALYTES

- Methadone
- Gabapentine
- EDDP
- Ketamine
- MDMA (Ecstasy)
- Oxycodone
- 6-Monoacetylmorphine
- Phencyclidine
- Carisoprodol/Meprobamate
- Pregabalin
- Ethyl glucuronide
- Tramadol
- Fentanyl
- Zolpidem

- Creatinine (quantitative determination)

REQUESTS

Level 1: Immunological tests including confirmatory analyses for the positive results

Level 2: Qualitative general unknown

(A) The proficiency test is carried out under the organizational and scientific management of Arvecon GmbH.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
DHF 1/27	26 February	02 March	05 April
DHF 2/27	04 June	08 June	12 July
DHF 3/27	24 September	28 September	02 November

PRICES

			ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	1.16.500	450,-	1.16.550	309,-
DHF 1/27	1.16.100	180,-	1.16.150	103,-
DHF 2/27	1.16.200	180,-	1.16.250	103,-
DHF 3/27	1.16.300	180,-	1.16.350	103,-

*The annual subscription includes participation in the three proficiency tests during 2027.

MATERIAL

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

ANALYTES

SAMPLE A		SAMPLE B	
THC	Amphetamine	Oxycodone	7-Aminoflunitrazepam
CBN	MDMA	Tramadol	Oxazepam
CBD	MDA	O-desmethyltramadol	Lorazepam
THC-COOH	MDE	Tilidine	Ketamine
Morphine	Cocaine	Fentanyl	Norketamine
MAM	Benzoyllecgonine	Diazepam	Methadone
Codeine	Cocaethylene	Nordiazepam	EDDP
	Norcocaine	Alprazolam	Buprenorphine
		Bromazepam	Norbuprenorphine
		Flunitrazepam	

REQUESTS

Quantitative determination of the analytes. The results of both samples are certified.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
DMS 1/27	02 April	06 April	03 May
DMS 2/27	20 August	24 August	20 September

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
	Order no.		Price		Order no.	
Annual subscription 2027*	1.17.500	335,-			1.17.550	110,-
DMS 1/27	1.17.100	190,-			1.17.150	55,-
DMS 2/27	1.17.200	190,-			1.17.250	55,-

*The annual subscription includes participation in the three proficiency tests during 2027.

MATERIAL

1 sample, each 200 mg cut or powdered, made of drug user hair.

ANALYTES

Due to the origin of the material, the samples have different compositions. The screening should include the following analytes:

- THC
- Morphine
- MAM
- Amphetamine
- MDMA
- MDA
- Cocaine
- Benzoyllecgonine

The presence of other analytes is possible.

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
QSA 1/27	05 February	09 February	08 March
QSA 2/27	14 May	18 May	14 June
QSA 3/27	27 August	31 August	27 September

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	1.18.500	385,-	330,-	1.18.550	195,-	180,-
QSA 1/27	1.18.100	154,-	132,-	1.18.150	65,-	60,-
QSA 2/27	1.18.200	154,-	132,-	1.18.250	65,-	60,-
QSA 3/27	1.18.300	154,-	132,-	1.18.350	65,-	60,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

sample A: serum, liquid, 5 mL

sample B: urine, liquid, 10 mL

ANALYTES

One or more drugs, with toxicological case history

REQUESTS

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

DATES

	SAMPLE SHIPMENT	START	DEADLINE
GHB 1/27	12 February	16 February	08 March
GHB 2/27	28 May	01 June	21 June
GHB 3/27	24 September	28 September	18 October

PRICES

			ADDITIONAL SAMPLES	
SERUM UND URIN	Order no.	Price	Order no.	Price
Annual subscription 2027*	1.19.500	305,-	1.19.550	198,-
GHB 1/27	1.19.100	122,-	1.19.150	66,-
GHB 2/27	1.19.200	122,-	1.19.250	66,-
GHB 3/27	1.19.300	122,-	1.19.350	66,-

RINGVERSUCHE			ADDITIONAL SAMPLES	
NUR SERUM	Order no.	Price	Order no.	Price
Annual subscription 2027*	1.20.500	198,-	1.20.550	111,-
GHB 1/27	1.20.100	79,-	1.20.150	37,-
GHB 2/27	1.20.200	79,-	1.20.250	37,-
GHB 3/27	1.20.300	79,-	1.20.350	37,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

2 samples (A, B), each 2 mL lyophilized serum;
2 samples (C, D), each 2 mL lyophilized urine

ANALYT

Gamma hydroxybutyric acid (GHB)

REQUESTS

Quantification of the analyt

DATES

	SAMPLE SHIPMENT	START	DEADLINE
SAL 1/27	02 April	06 April	03 May
SAL 2/27	03 September	07 September	04 October

PRICES

	Order no.		Price	ADDITIONAL SAMPLES	
				Order no.	Price
Annual subscription 2027*	1.21.500	272,-		1.21.550	104,-
SAL 1/27	1.21.100	146,-		1.21.150	52,-
SAL 2/27	1.21.200	146,-		1.21.250	52,-

*The annual subscription includes participation in the 2 proficiency tests during 2027.

MATERIAL

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

ANALYTES

Cannabinoids:	THC
Amphetamines:	Amphetamine, MDMA, Methamphetamine
Cocaine and metabolites:	Cocaine, Benzoylecgonine
Opiates/Opioids:	MAM, Codeine, Morphine, Buprenorphine, Norbuprenorphine, Methadone, EDDP
Benzodiazepines:	Diazepam, Nordiazepam, Flunitrazepam, Oxazepam

REQUESTS

Identification and quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
BZF 1/27	15 January	19 January	15 February
BZF 2/27	23 April	27 April	24 May
BZF 3/27	20 August	24 August	20 September

PRICES

	Order no.	Price	GTFCh	ADDITIONAL SAMPLES		
				Order no.	Price	GTFCh
Annual subscription 2027*	2.30.500	400,-	333,-	2.30.550	234,-	189,-
BZF 1/27	2.30.100	160,-	133,-	2.30.150	78,-	63,-
BZF 2/27	2.30.200	160,-	133,-	2.30.250	78,-	63,-
BZF 3/27	2.30.300	160,-	133,-	2.30.350	78,-	63,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

ANALYTES

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

All concentrations given as µg/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

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.31.500	188,-	173,-	2.31.550	105,-	90,-
BZF 1/27	2.31.100	75,-	69,-	2.31.150	35,-	30,-
BZF 2/27	2.31.200	75,-	69,-	2.31.250	35,-	30,-
BZF 3/27	2.31.300	75,-	69,-	2.31.350	35,-	30,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

Sample C, lyophilized serum, 1 x 3 mL

ANALYTES

<u>Sample C</u>			
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
Demoxepam	400-1000	Prazepam	200-800

All concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
OSU 1/27	15 January	19 January	15 February
OSU 2/27	23 April	27 April	24 May
OSU 3/27	20 August	24 August	20 September

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.40.500	423,-	383,-	2.40.550	204,-	159,-
OSU 1/27	2.40.100	169,-	153,-	2.40.150	68,-	53,-
OSU 2/27	2.40.200	169,-	153,-	2.40.250	68,-	53,-
OSU 3/27	2.40.300	169,-	153,-	2.40.350	68,-	53,-

ONLY THE REPLACEMENT DRUGS						
Annual subscription 2027*	2.32.500	290,-	250,-	2.32.550	204,-	159,-
OSU (ST) 1/27	2.32.100	116,-	100,-	2.32.150	68,-	53,-
OSU (ST) 2/27	2.32.200	116,-	100,-	2.32.250	68,-	53,-
OSU (ST) 3/27	2.32.300	116,-	100,-	2.32.350	68,-	53,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

Sample A: lyophilized serum, 2,5 mL
Sample B: lyophilized urine, 2,5 mL

ANALYTES

		SERUM	URINE			SERUM	URINE
Replacement drugs				Futher analytes			
Buprenorphine	1-20	0,5-25		Oxycodone	5 -100	25-250	
Norbuprenorphine	2-40	0,5-50		Hydrocodone	5-150	25-250	
Methadone	10-500	10-1000		Hydromorphone	5-150	25-250	
EDDP	10-250	10-1000		Tilidine	5-150	25-250	
				Nortilidine	5-150	25-250	
				Tramadol	5-1000	50-250	
				O-Desmethyiltramadol	50-500	50-250	
				Fentanyl	0,2-15	0,5-5	
				Norfentanyl	0,2-15	0,5-5	

All concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
TCA 1/27	22 January	26 January	22 February
TCA 2/27	16 April	20 April	17 May
TCA 3/27	25 June	29 June	26 July
TCA 4/27	01 October	05 October	02 November

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.33.500	511,-	445,-	2.33.550	328,-	284,-
TCA 1/27	2.33.100	146,-	129,-	2.33.150	82,-	71,-
TCA 2/27	2.33.200	146,-	129,-	2.33.250	82,-	71,-
TCA 3/27	2.33.300	146,-	129,-	2.33.350	82,-	71,-
TCA 4/27	2.33.400	146,-	129,-	2.33.450	82,-	71,-

*The annual subscription includes participation in the 4 proficiency tests during 2027.

MATERIAL

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

ANALYTES

<u>Sample A B</u>	<u>Sample C D</u>
Doxepine	Imipramine
Nordoxepine	Desipramine
Amitriptyline	Clomipramine
Nortriptyline	Norclomipramine
Trimipramine	Maprotiline
Opipramol	Desmethylnmaprotiline
	Protriptyline

All analytes 10 - 1500 µg/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
TAB 1/27	12 February	16 February	08 March
TAB 2/27	20 August	24 August	13 September

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
					Order no.	Price
Annual subscription 2027*	2.34.500	240,-			2.34.550	84,-
TAB 1/27	2.34.100	132,-			2.34.150	42,-
TAB 2/27	2.34.200	132,-			2.34.250	42,-

*The annual subscription includes participation in the 2 proficiency tests during 2027.

MATERIAL

2 samples, lyophilized serum, each 2,5 mL

ANALYTES

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

All concentrations given as 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
Piritramide	3,5-14,0

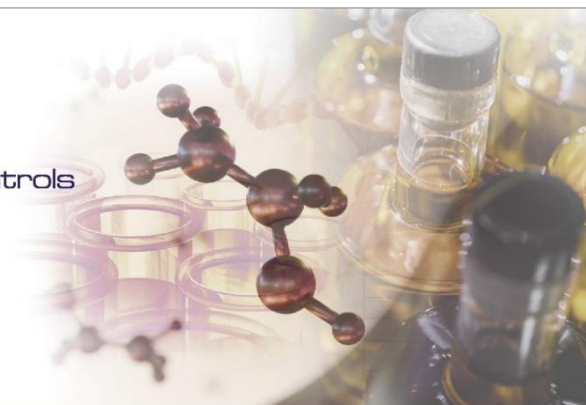
All concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes



Accuracy controls



PEth Analysis – Trusted Quality. Proven Performance.

Since 2010, ACQ Science has been a leading provider of reliable QC materials for a wide range of analytical methods. In response to the growing demand for the analysis of the direct alcohol marker PEth, we expanded our portfolio in 2016 to include high-quality PEth testing solutions:

- Authentic whole blood containing PEth as well as whole blood controls spiked with the PEth 16:0/18:1 isoform (target values at 40 and 300 ng/mL) currently on stock
- Stable, lyophilized controls and standards with a shelf-life of up to 5 years – customized to your concentration requirements
- In partnership with HemaXis, a trademark of DBS System SA, ACQ Science delivers comprehensive solutions for quality control and sample collection, ensuring efficient, streamlined PEth analysis on dried blood spots (DBS)



For more information, please get in touch with us at info@acq-science.de
HemaXis 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

	SAMPLE SHIPMENT	START	DEADLINE
TDMA 1/27	05 February	09 February	08 March
TDMA 2/27	14 May	18 May	14 June
TDMA 3/27	03 September	07 September	04 October

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.35.500	418,-	378,-	2.35.550	252,-	219,-
TDMA 1/27	2.35.100	167,-	151,-	2.35.150	84,-	73,-
TDMA 2/27	2.35.200	167,-	151,-	2.35.250	84,-	73,-
TDMA 3/27	2.35.300	167,-	151,-	2.35.350	84,-	73,-

*The annual subscription includes participation in the three proficiency tests during 2027.

MATERIAL

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

ANALYTES

SAMPLE A/B		SAMPLE C/D	
Clozapine	100-1500	Risperidone	1-15
N-Desmethylclozapine	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

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
TDMB 1/27	19 February	23 February	22 March
TDMB 2/27	28 May	01 June	28 June
TDMB 3/27	17 September	21 September	18 October

PRICES

	Order no.	Price	GTFCh	ADDITIONAL SAMPLES		
				Order no.	Price	GTFCh
Annual subscription 2027*	2.36.500	405,-	363,-	2.36.550	231,-	198,-
TDMB 1/27	2.36.100	162,-	145,-	2.36.150	77,-	66,-
TDMB 2/27	2.36.200	162,-	145,-	2.36.250	77,-	66,-
TDMB 3/27	2.36.300	162,-	145,-	2.36.350	77,-	66,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

ANALYTES

Carbamazepine	1-15
10-OH-Carbamazepine ...	5-50
Oxcarbazepine	5-50
Felbamate	15-100
Pregabalin	0,5-10
Gabapentin	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

	SAMPLE SHIPMENT	START	DEADLINE
TDMC 1/27	05 March	09 March	05 April
TDMC 2/27	11 June	15 June	12 July
TDMC 3/27	01 October	05 October	02 November

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.37.500	405,-	363,-	2.37.550	231,-	198,-
TDMC 1/27	2.37.100	162,-	145,-	2.37.150	77,-	66,-
TDMC 2/27	2.37.200	162,-	145,-	2.37.250	77,-	66,-
TDMC 3/27	2.37.300	162,-	145,-	2.37.350	77,-	66,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

ANALYTES

SAMPLE A/B

Aripiprazol	50-500
Dehydroaripiprazol	50-500
Flupenthixol	1,0-25
Fluphenazin	0,5-15
Haloperidol	1,0-25
Sertindol	25-150
Sulpirid	100-1000
Zotepin	10-250
Melperon	20-150
Pipamperon	50-500
Chlorpromazin	30-400
Prothipendyl	5-20
Zuclopenthixol	50-500

All concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
TDMD 1/27	19 March	23 March	19 April
TDMD 2/27	25 June	29 June	26 July
TDMD 3/27	15 October	19 October	15 November

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.38.500	393,-	350,-	2.38.550	234,-	201,-
TDMD 1/27	2.38.100	157,-	140,-	2.38.150	78,-	67,-
TDMD 2/27	2.38.200	157,-	140,-	2.38.250	78,-	67,-
TDMD 3/27	2.38.300	157,-	140,-	2.38.350	78,-	67,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

ANALYTES

Duloxetine	10 -150
Fluoxetine	25-500
Norfluoxetine	25-500
Fluvoxamine	25-250
Mianserine	10-150
Mirtazapine	25-150
Paroxetine	10-150
Reboxetine	25-300
Sertraline	10-250
Venlafaxine	25-400
Desmethylvenlafaxine ..	25-400
Citalopram	25-150
Trazodone	600-1200

All concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
TDME 1/27	02 April	06 April	03 May
TDME 2/27	09 July	13 July	09 August
TDME 3/27	29 October	02 November	29 November

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	2.39.500	395,-	353,-	2.39.550	234,-	201,-
TDME 1/27	2.39.100	158,-	141,-	2.39.150	78,-	67,-
TDME 2/27	2.39.200	158,-	141,-	2.39.250	78,-	67,-
TDME 3/27	2.39.300	158,-	141,-	2.39.350	78,-	67,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

ANALYTES

SAMPLE A/B	
Bupropione	10-100
Hydroxybupropione	850-1500
Milnacipran	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

	SAMPLE SHIPMENT	START	DEADLINE
ETOH 1/27	22 January	26 January	15 February
ETOH 2/27	09 April	13 April	03 May
ETOH 3/27	25 June	29 June	19 July
ETOH 4/27	24 September	28 September	18 October

PRICES

				ADDITIONAL SAMPLES		
	Order no.	Price	GTFCh	Order no.	Price	GTFCh
Annual subscription 2027*	3.50.500	326,-	287,-	3.50.550	192,-	172,-
ETOH 1/27	3.50.100	93,-	82,-	3.50.150	48,-	43,-
ETOH 2/27	3.50.200	93,-	82,-	3.50.250	48,-	43,-
ETOH 3/27	3.50.300	93,-	82,-	3.50.350	48,-	43,-
ETOH 4/27	3.50.400	93,-	82,-	3.50.450	48,-	43,-

*The annual subscription includes participation in the 4 proficiency tests during 2027.

MATERIAL

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

ANALYT

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 ± 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 ± 5%.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
ETB 1/27	29 January	02 February	22 February
ETB 2/27	16 April	20 April	10 May
ETB 3/27	02 July	06 July	26 July
ETB 4/27	01 October	05 October	25 October

PRICES

			ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	3.51.500	326,-	3.51.550	220,-
ETB 1/27	3.51.100	93,-	3.51.150	55,-
ETB 2/27	3.51.200	93,-	3.51.250	55,-
ETB 3/27	3.51.300	93,-	3.51.350	55,-
ETB 4/27	3.51.400	93,-	3.51.450	55,-

*The annual subscription includes participation in the 4 proficiency tests during 2027.

MATERIAL

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

ANALYT

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

(A) The proficiency test is carried out under the organizational and scientific management of Arvecon GmbH.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
AMF 1/27	29 January	02 February	01 March
AMF 2/27	30 April	04 May	31 May
AMF 3/27	13 August	17 August	13 September
AMF 4/27	29 October	02 November	29 November

PRICES

			ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	3.52.500	315,-	3.52.550	200,-
AMF 1/27	3.52.100	90,-	3.52.150	50,-
AMF 2/27	3.52.200	90,-	3.52.250	50,-
AMF 3/27	3.52.300	90,-	3.52.350	50,-
AMF 4/27	3.52.400	90,-	3.52.450	50,-

*The annual subscription includes participation in the 4 proficiency tests during 2027.

MATERIAL

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

ANALYT

CDT

REQUESTS

Quantitative determination of the analyte

DATES

	SAMPLE SHIPMENT	START	DEADLINE
PETH 1/27	19 February	23 February	22 March
PETH 2/27	04 June	08 June	05 July
PETH 3/27	01 October	05 October	02 November

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
	Order no.		Price		Order no.	
Annual subscription 2027*	3.53.500	290,-			3.53.550	195,-
PETH 1/27	3.53.100	116,-			3.53.150	65,-
PETH 2/27	3.53.200	116,-			3.53.250	65,-
PETH 3/27	3.53.300	116,-			3.53.350	65,-

*The annual subscription includes participation in the three proficiency tests during 2027.

MATERIAL

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

ANALYT

Phosphatidylethanol (PEth 16:0/18:1)

REQUESTS

Quantitative determination of the analyte

(A) The proficiency test is carried out under the organizational and scientific management of Arvecon GmbH.

DATES

	SAMPLE SHIPMENT	START	DEADLINE
BGS 1/27	12 March	16 March	12 April
BGS 2/27	27 August	31 August	27 September

PRICES

	ADDITIONAL SAMPLES	
	Order no.	Price
Annual subscription 2027*	3.54.500	288,-
BGS 1/27	3.54.100	162,-
BGS 2/27	3.54.200	162,-

	ADDITIONAL SAMPLES	
	Order no.	Price
	3.54.550	140,-
	3.54.150	70,-
	3.54.250	70,-

*The annual subscription includes participation in the 2 proficiency tests during 2027.

MATERIAL

Liquid serum, 1 x 2,5 mL

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
- Acetone
- Isopropanol

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
ETG 1/27	05 March	09 March	05 April
ETG 2/27	11 June	15 June	12 July
ETG 3/27	08 October	12 October	08 November

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
					Order no.	Price
Annual subscription 2027*	3.55.500	325,-			3.55.550	168,-
ETG 1/27	3.55.100	130,-			3.55.150	56,-
ETG 2/27	3.55.200	130,-			3.55.250	56,-
ETG 3/27	3.55.300	130,-			3.55.350	56,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

Sample A: lyophilized serum, 2,5 mL
Sample B: lyophilized urine, 2,5 mL

ANALYTES

Ethyl glucuronide, Ethylsulfate

Concentration ranges:

Serum 0,1 - 5
Urine 0,1 - 10

All concentrations given as mg/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
EGH 1/27	26 February	02 March	30 March
EGH 2/27	04 June	08 June	05 July
EGH 3/27	24 September	28 September	25 October

PRICES

	Order no.		Price		ADDITIONAL SAMPLES	
					Order no.	Price
Annual subscription 2027*	3.56.500	315,-			3.56.550	186,-
EGH 1/27	3.56.100	126,-			3.56.150	62,-
EGH 2/27	3.56.200	126,-			3.56.250	62,-
EGH 3/27	3.56.300	126,-			3.56.350	62,-

*The annual subscription includes participation in the three proficiency tests during 2027.

MATERIAL

2 samples (A, B): each 100 mg powdered or cut, authentic human hair. Where available, samples with cut hair are offered in the EGH 2/26 proficiency test.

ANALYT

Ethyl glucuronide

REQUESTS

Quantitative determination of the analyte

DATES

	SAMPLE SHIPMENT	START	DEADLINE
ATU 1/27	13 August	17 August	06 September
ATU 2/27	08 October	12 October	02 November

PRICES

	Order no. Price		ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	4.70.500	190,-	4.70.550	84,-
ATU 1/27	4.70.100	108,-	4.70.150	42,-
ATU 2/27	4.70.200	108,-	4.70.250	42,-

*The annual subscription includes participation in the 2 proficiency tests during 2027.

MATERIAL

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

ANALYT

Amanitin

REQUESTS

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

DATES

	SAMPLE SHIPMENT	START	DEADLINE
MEP 1/27	19 February	23 February	22 March
MEP 2/27	04 June	08 June	05 July
MEP 3/27	17 September	21 September	18 October

PRICES

			ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	4.71.500	210,-	4.71.550	135,-
MEP 1/27	4.71.100	84,-	4.71.150	45,-
MEP 2/27	4.71.200	84,-	4.71.250	45,-
MEP 3/27	4.71.300	84,-	4.71.350	45,-

*The annual subscription includes participation in the 3 proficiency tests during 2027.

MATERIAL

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

ANALYTES

Metanephrine 50 – 500 ng/L
Normetanephrine 50 – 750 ng/L

REQUESTS

Quantitative determination of the analytes

DATES

	SAMPLE SHIPMENT	START	DEADLINE
NIC 1/27	02 April	06 April	03 May
NIC 2/27	03 September	07 September	04 October

PRICES

	Order no.	Price	ADDITIONAL SAMPLES	
	Order no.	Price	Order no.	Price
Annual subscription 2027*	4.72.500	140,-	4.72.550	90,-
NIC 1/27	4.72.100	76,-	4.72.150	45,-
NIC 2/27	4.72.200	76,-	4.72.250	45,-

*The annual subscription includes participation in the 2 proficiency tests during 2027.

MATERIAL

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

ANALYTES

Nicotine 5 - 5.000
Cotinine 5 - 8.000
3-OH-Cotinine ... 25 - 25.000
Anabasine 2 - 500

All concentrations given as µg/L

REQUESTS

Quantitative determination of the analytes

1. PARTICIPATION

All laboratories working in the field of forensic or clinical toxicology or related fields may participate.

2. ANALYTICAL METHODS

If not stated otherwise in the requests regarding the proficiency test no special methods for analysis are prescribed.

3. REGISTRATION

Registration for participation is possible up to the start of the EQA scheme, but for organizational reasons this should be done at least one week before the start. Later registrations within the period of the respective EQA scheme are only possible on request.

4. SUBSCRIPTION AND SINGLE TEST

Enrolment may be by subscription or for an single test.

5. SUBMISSION OF RESULTS

The results of the proficiency tests may be submitted by post, fax, e-mail or via our website.

6. DEADLINE FOR RESULTS AND LATE ENTRIES

The results must have been reported by the scheduled deadline. Extensions are possible in justified cases after agreement with the test organizer. If the results are received late, the participant will receive a results report without including their own results.

7. EVALUATION

The evaluation corresponds to acknowledged scientific criteria which are supervised by accompanying working groups and/or expert groups.

8. SUBSEQUENT CORRECTIONS OF RESULTS REPORTS

Incorrect entries in the result forms can only be corrected until the reporting deadline of the respective EQA scheme. Subsequent corrections are only possible in justified cases with the approval of the GTFCh coordinators.

9. CORRECTION OF REPORTS

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.

10. FAILURE OF TESTS

If a proficiency test cannot take place, already paid participation fees will be refunded.

CONDITIONS OF PARTICIPATION

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 MATERIAL

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. SHIPPING OF THE SAMPLES

The shipment of the proficiency test samples usually takes place 2 - 5 working days before the official start of the proficiency test. Especially when shipping abroad, delays in delivery may occur. We have therefore included an additional week in the testing periods. If you have not received the samples one week after the official start date, please notify us by phone or e-mail so that we can arrange further steps.

Shipping outside Europe will be done by express service. The costs for this will be charged separately. Costs per shipment: North America EUR 40, - | South America, Asia, Oceania, Africa EUR 60, - | Asia EUR 55, -

: Nordamerika EUR 40,- | Südamerika, Afrika, Ozeanien EUR 60,- | Asien EUR 55,-.

9. 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. 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.

10. PAYMENT

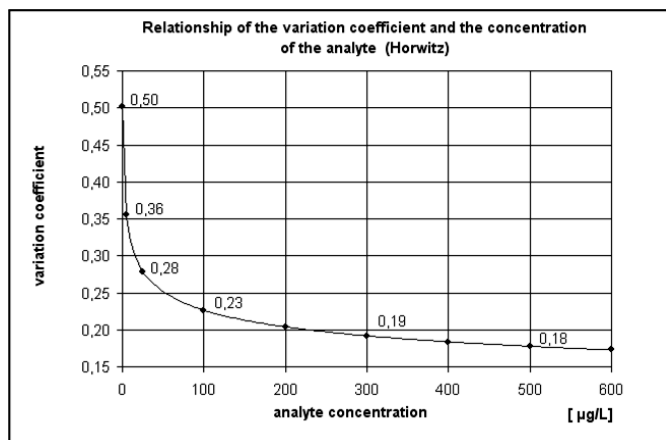
After invoicing, payment can be made by bank transfer or credit card (Mastercard, Visa). The transmission of the credit card data can be done in writing, by e-mail or via our homepage. Checks cannot be accepted.

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 deDATESd 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 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, Chemin de Blandonnet 8, CP 401, 1214 Vernier, Genf, Schweiz
- [3] Herbold M, Schmitt G, Aderjan R (2003)
Auswertung forensischer Ringversuche nach DIN 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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