

CERTIFICATE

Survey of 24 October 2025

You have fulfilled the requirements of the External Quality Assessment with the following analysis

Clinical Chemistry - Conventional Analysis (100):

Validity 6 months:

AP (R: B1a)
Albumin (R: B1a)
Bilirubin (R: B1a)
CK (R: B1a)
Calcium (R: B1a)
Chloride (R: B1a)
Cholesterol (R: B1a)
Creatinine (R: B1a)
GGT (R: B1a)
GOT (ASAT) (R: B1a)
GPT (ALAT) (R: B1a)
Glucose (R: B1a)
IgA (R: B1a)
IgG (R: B1a)

IgM (R: B1a)
LDH (R: B1a)
Lactate (R: B1a)
Lithium (R: B1a)
Magnesium (R: B1a)
Phosphate (R: B1a)
Potassium (R: B1a)
Protein (R: B1a)
Sodium (R: B1a)
Transferrine (R: B1a)
Triglycerides (R: B1a)
Urea (R: B1a)
Uric Acid (R: B1a)

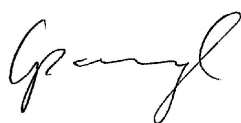
Validity 12 months:

Bilirubin conj.
CHE
GLDH
HBDH
Iron
Iron binding Capacity
Lipase
Osmolality
Pancreas Amylase
alpha-Amylase

(R) analysis is subject to the RiliBÄK

Customer:
10011854
Dr. Steffen Spranger
Labor Dr. Spranger und Kollegen
Lindberghstr. 9-13
85051 Ingolstadt

Düsseldorf, 03 November 2025



Prof. Dr. med. Michael Spannagl
(Head of Reference Institution)



Dr. rer. nat. Manfred Falck
(Adviser)

CERTIFICATE OF PARTICIPATION

Survey of 24 October 2025

You have participated in the External Quality Assessment with the following analysis

Clinical Chemistry - Conventional Analysis (100):

AP (R: B1a)	HBDH	Protein (R: B1a)
Albumin (R: B1a)	IgA (R: B1a)	Sodium (R: B1a)
Bilirubin (R: B1a)	IgG (R: B1a)	Transferrine (R: B1a)
Bilirubin conj.	IgM (R: B1a)	Triglycerides (R: B1a)
CHE	Iron	Urea (R: B1a)
CK (R: B1a)	Iron binding Capacity	Uric Acid (R: B1a)
Calcium (R: B1a)	LDH (R: B1a)	alpha-Amylase
Chloride (R: B1a)	Lactate (R: B1a)	
Cholesterol (R: B1a)	Lipase	
Creatinine (R: B1a)	Lithium (R: B1a)	
GGT (R: B1a)	Magnesium (R: B1a)	
GLDH	Osmolality	
GOT (ASAT) (R: B1a)	Pancreas Amylase	
GPT (ALAT) (R: B1a)	Phosphate (R: B1a)	
Glucose (R: B1a)	Potassium (R: B1a)	

(R) analysis is subject to the RiliBÄK

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Dr. rer. nat. Manfred Falck
(Adviser)

Listing and evaluation of the results

10011854: Dr. Steffen Spranger
Labor Dr. Spranger und Kollegen

Survey of 24 October 2025

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100

Clinical Chemistry - Conventional Analysis

Analyte	Sample 100A-251007	Unit	Your value	Target value	TV-Type	Lower limit	Upper limit	Deviation	Z-Score	Meets criteria	
AP	-01	U/l	406	422	SV	346	498	-3.8%	-0,812	+	
	-02		88.0	89.3	SV	73.2	105	-1.5%	-0,293	+	
Albumin	-01	g/dl	2.95	2.80	SV	2.24	3.36	5.4%	0,545	+	
	-02		4.31	3.99	SV	3.19	4.79	8.0%	1,23	+	
Bilirubin	-01	mg/dl	4.12	4.09	SV	3.19	4.99	0.7%	0,273	+	
	-02		0.860	0.843	SV	0.658	1.03	2.0%	0,425	+	
Bilirubin conj.	-01	mg/dl	1.83	1.85	SV	1.18	2.52	-1.1%	-0,187	+	
	-02		0.320	0.324	SV	0.207	0.441	-1.2%	-0,138	+	
CHE	-01	U/l	1970	1983	SV	1626	2340	-0.7%	-0,176	+	
	-02		7039	7040	SV	5773	8307	0.0%	-0,007	+	
CK	-01	U/l	442	448	RMV	358	538	-1.3%	-0,742	+	
	-02		95.0	84.6	RMV	67.7	102	12.3%	1,57	+	
Calcium	-01	mmol/l	2.93	3.04	RMV	2.74	3.34	-3.6%	-1,53	+	
	-02		2.09	2.19	RMV	1.97	2.41	-4.6%	-1,85	+	
Chloride	-01	mmol/l	83.0	82.5	RMV	75.9	89.1	0.6%	0,321	+	
	-02		108	107	MW	98.4	116	0.9%	0,565	+	
Cholesterol	-01	mg/dl	99.6	108	RMV	94.0	122	-7.8%	-2,46	+	
	-02		153	157	RMV	137	177	-2.7%	-0,939	+	
Creatinine	-01	mg/dl	5.15	5.24	RMV	4.19	6.29	-1.7%	-0,865	+	
	-02		0.860	0.911	RMV	0.729	1.09	-5.6%	-1,5	+	
GGT	-01	U/l	160	159	RMV	126	192	0.6%	0,161	+	
	-02		36.0	37.1	RMV	29.3	44.9	-3.0%	-0,643	+	
GLDH	-01	U/l	14.2	14.2	SV	9.94	18.5	0.0%	0	+	
	-02		6.10	5.48	SV	3.84	7.12	11.3%	1,1	+	
GOT (ASAT)	-01	U/l	216	209	RMV	165	253	3.3%	0,753	+	
	-02		43.0	42.4	RMV	33.5	51.3	1.4%	0,28	+	
GPT (ALAT)	-01	U/l	95.0	97.7	RMV	77.2	118	-2.8%	-0,55	+	
	-02		45.0	44.4	RMV	35.1	53.7	1.4%	0,246	+	
Glucose	-01	mg/dl	276	282	RMV	240	324	-2.1%	-0,806	+	
	-02		72.0	77.1	RMV	65.5	88.7	-6.6%	-2,67	+	
HBDH	-01	U/l	401	392	SV	310	474	2.3%	0,612	+	
	-02		143	137	SV	108	166	4.4%	1,22	+	
IgA	-01	mg/dl	122	122	SV	97.6	146	0.0%	0	+	
	-02		201	200	SV	160	240	0.5%	0,152	+	
IgG	-01	mg/dl	607	618	SV	507	729	-1.8%	-0,582	+	
	-02		999	995	SV	816	1174	0.4%	0,147	+	
IgM	-01	mg/dl	49.0	51.3	SV	38.0	64.6	-4.5%	-0,623	+	
	-02		92.0	95.2	SV	70.4	120	-3.4%	-0,539	+	
Iron	-01	µmol/l	11.4	11.5	SV	9.89	13.1	-1.1%	-0,287	+	
	-02		17.3	17.6	SV	15.1	20.1	-1.9%	-0,64	+	
Iron binding Capacity	-01	µmol/l	42.4	38.4	SV	29.2	47.6	10.5%	0,962	+	
	-02		65.4	58.3	SV	44.3	72.3	12.2%	1,13	+	
LDH	-01	U/l	372	380	RMV	312	448	-2.1%	-0,584	+	
	-02		145	149	RMV	122	176	-2.7%	-0,75	+	
Lactate	-01	mmol/l	1.20	1.18	SV	0.968	1.39	1.6%	0,571	+	
	-02		2.05	2.02	SV	1.66	2.38	1.7%	0,5	+	
Lipase	-01	U/l	92.6	89.9	SV	67.4	112	3.0%	0,672	+	
	-02		45.7	46.2	SV	34.7	57.8	-1.1%	-0,259	+	

Listing and evaluation of the results

10011854: Dr. Steffen Spranger
Labor Dr. Spranger und Kollegen

Survey of 24 October 2025

Analyte	Sample 100A- 251007	Unit	Your value	Target value	TV- Type	Lower limit	Upper limit	Deviation	Z-Score	Meets criteria	
Lithium	-01	mmol/l	2.02	2.06	RMV	1.81	2.31	-1.9%	-0,714	+	
	-02		0.850	0.840	RMV	0.739	0.941	1.2%	0,263	+	
Magnesium	-01	mmol/l	1.77	1.81	RMV	1.54	2.08	-2.2%	-0,93	+	
	-02		0.900	0.892	RMV	0.758	1.03	0.9%	0,32	+	
Osmolality	-01	mOsmol/kg	482	488	SV	429	547	-1.2%	-0,662	+	
	-02		283	292	SV	257	327	-3.1%	-1,13	+	
Pancreas Amylase	-01	U/l	334	331	SV	232	430	0.9%	0,401	+	
	-02		49.0	48.6	SV	34.0	63.2	0.8%	0,331	+	
Phosphate	-01	mmol/l	2.28	2.25	SV	1.89	2.61	1.3%	0,517	+	
	-02		1.04	1.01	SV	0.848	1.17	3.0%	0,909	+	
Potassium	-01	mmol/l	6.06	6.12	RMV	5.63	6.61	-1.0%	-0,659	+	
	-02		3.95	3.99	RMV	3.67	4.31	-1.0%	-0,615	+	
Protein	-01	g/dl	4.12	4.36	RMV	3.92	4.80	-5.5%	-1,88	+	
	-02		6.35	6.28	RMV	5.65	6.91	1.1%	0,47	+	
Sodium	-01	mmol/l	127	128	RMV	122	134	-0.8%	-0,641	+	
	-02		140	142	RMV	135	149	-1.4%	-1,16	+	
Transferrine	-01	mg/dl	168	167	SV	147	187	0.6%	0,221	+	
	-02		259	256	SV	225	287	1.2%	0,457	+	
Triglycerides	-01	mg/dl	92.2	91.5	RMV	76.9	106	0.8%	0,14	+	
	-02		96.0	95.5	RMV	80.2	111	0.5%	0,121	+	
Urea	-01	mg/dl	93.0	103	RMV	82.4	124	-9.7%	-2,99	+	
	-02		28.0	29.1	RMV	23.3	34.9	-3.8%	-0,88	+	
Uric Acid	-01	mg/dl	8.90	9.58	RMV	8.33	10.8	-7.1%	-2,17	+	
	-02		4.60	4.85	RMV	4.22	5.48	-5.2%	-1,37	+	
alpha-Amylase	-01	U/l	362	358	SV	251	465	1.1%	0,591	+	
	-02		98.0	97.1	SV	68.0	126	0.9%	0,486	+	

Listing and evaluation of the results

10011854: Dr. Steffen Spranger
Labor Dr. Spranger und Kollegen

Survey of 24 October 2025

Analyte	Sample 100A- 251007	Your unit	Stated value	Conversion factor	Method	Manu- facturer	Device	Testkit
AP	-01	U/l	406	1.00	11	RO	RO71	
	-02		88.0	1.00				
Albumin	-01		2.95	1.00				
	-02		4.31	1.00				
Bilirubin	-01	mg/dl	4.12	1.00	127	RO	RO71	
	-02		0.860	1.00				
Bilirubin conj.	-01	mg/dl	1.83	1.00	127	RO	RO56	
	-02		0.320	1.00				
CHE	-01	U/l	1970	1.00	104	RO	RO71	
	-02		7039	1.00				
CK	-01	U/l	442	1.00	60	RO	RO71	
	-02		95.0	1.00				
Calcium	-01	mmol/l	2.93	1.00	77	RO	RO71	
	-02		2.09	1.00				
Chloride	-01	mmol/l	83.0	1.00	71	RO	RO71	
	-02		108	1.00				
Cholesterol	-01	mg/dl	99.6	1.00	33	RO	RO71	
	-02		153	1.00				
Creatinine	-01	mg/dl	5.15	1.00	44	RO	RO71	
	-02		0.860	1.00				
GGT	-01	U/l	160	1.00	60	RO	RO71	
	-02		36.0	1.00				
GLDH	-01	U/l	14.2	1.00	80	RO	RO56	
	-02		6.10	1.00				
GOT (ASAT)	-01	U/l	216	1.00	60	RO	RO71	
	-02		43.0	1.00				
GPT (ALAT)	-01	U/l	95.0	1.00	60	RO	RO71	
	-02		45.0	1.00				
Glucose	-01	mg/dl	276	1.00	58	RO	RO71	
	-02		72.0	1.00				
HBDH	-01	U/l	401	1.00	102	RO	RO56	
	-02		143	1.00				
IgA	-01	mg/dl	122	1.00	111	RO	RO56	
	-02		201	1.00				
IgG	-01	mg/dl	607	1.00	111	RO	RO71	
	-02		999	1.00				
IgM	-01		49.0	1.00				
	-02		92.0	1.00				
Iron	-01	µg/dl	63.5	0.179	51	RO	RO71	
	-02		96.4	0.179				
Iron binding Capacity	-01	µg/dl	237	0.179	86			
	-02		365	0.179				
LDH	-01	U/l	372	1.00	60	RO	RO71	
	-02		145	1.00				
Lactate	-01	mg/dl	10.8	0.111	43	RO	RO56	
	-02		18.5	0.111				
Lipase	-01	U/l	92.6	1.00	44	RO	RO71	
	-02		45.7	1.00				
Lithium	-01	mmol/l	2.02	1.00	94	RO	RO56	
	-02		0.850	1.00				
Magnesium	-01	mmol/l	1.77	1.00	128	RO	RO56	
	-02		0.900	1.00				
Osmolality	-01		482	1.00				
	-02		283	1.00				
Pancreas Amylase	-01	U/l	334	1.00	90	RO	RO71	
	-02		49.0	1.00				

Listing and evaluation of the results

10011854: Dr. Steffen Spranger
Labor Dr. Spranger und Kollegen

Survey of 24 October 2025

Analyte	Sample 100A- 251007	Your unit	Stated value	Conversion factor	Method	Manu- facturer	Device	Testkit
Phosphate	-01	mmol/l	2.28	1.00	7	RO	RO56	
	-02		1.04	1.00				
Potassium	-01	mmol/l	6.06	1.00	71	RO	RO71	
	-02		3.95	1.00				
Protein	-01	g/dl	4.12	1.00	28	RO	RO71	
	-02		6.35	1.00				
Sodium	-01	mmol/l	127	1.00	71	RO	RO71	
	-02		140	1.00				
Transferrine	-01	g/l	1.68	100	112	RO	RO56	
	-02		2.59	100				
Triglycerides	-01	mg/dl	92.2	1.00	57	RO	RO71	
	-02		96.0	1.00				
Urea	-01	mg/dl	93.0	1.00	117	RO	RO71	
	-02		28.0	1.00				
Uric Acid	-01	mg/dl	8.90	1.00	124	RO	RO71	
	-02		4.60	1.00				
alpha-Amylase	-01	U/l	362	1.00	101	RO	RO56	
	-02		98.0	1.00				

Additional information on the evaluation is available for download in the RV-Online system in the column "Report".

Individual summary of results

10011854: Dr. Steffen Spranger
Labor Dr. Spranger und Kollegen

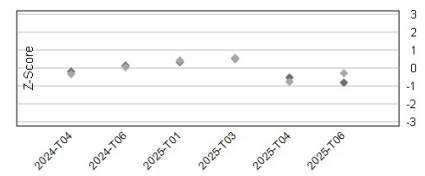
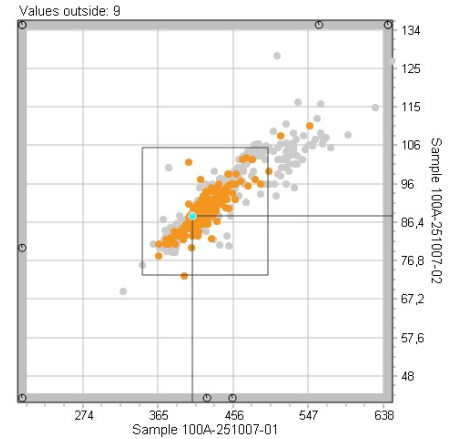
Survey of 24 October 2025

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Clinical Chemistry - Conventional Analysis

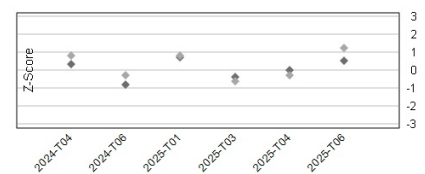
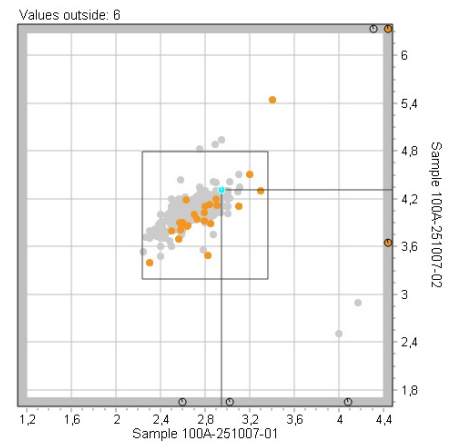
AP (U/l, N = 565)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	473	388 - 558	473	3.83	72	98.6	95.8	
	-02	101	82.8 - 119	101	3.86	72	97.2		
BE (OL) AU-System / other	-01	530	435 - 625	530	4.32	46	97.8	93.5	
	-02	104	85.3 - 123	104	4.55	46	93.5		
Siemens (BG, SI)	-01	422	346 - 498	422	2.56	33	100	100	
	-02	90.0	73.8 - 106	90.0	3.18	33	100		
Siemens (Dade Behring)	-01	440	361 - 519	440	3.05	34	100	100	
	-02	93.4	76.6 - 110	93.4	4.30	34	100		
Roche c303	-01	384	315 - 453	384	2.73	134	98.5	97.0	
	-02	83.1	68.1 - 98.1	83.1	3.20	134	97.8		
Roche other devices	-01	422	346 - 498	422	4.67	215	98.6	98.1	
	-02	89.3	73.2 - 105	89.3	4.97	215	98.6		
other providers / methods	-01	501	411 - 591	501	14.7	31	80.6	74.2	
	-02	98.8	81.0 - 117	98.8	13.3	31	83.9		

Rate of success: 96,1%



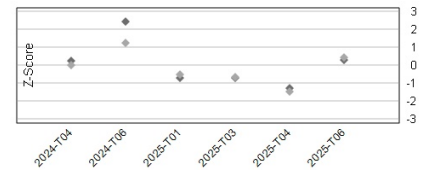
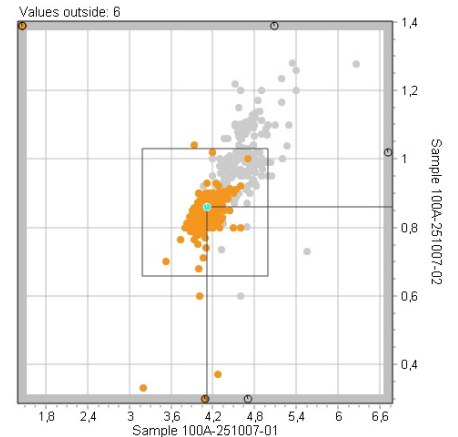
Albumin (g/dl, N = 477)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	2.55	2.04 - 3.06	2.55	3.14	56	98.2	96.4	
	-02	4.02	3.22 - 4.82	4.02	3.81	56	96.4		
Beckman (Olympus)	-01	2.55	2.04 - 3.06	2.55	2.67	38	97.4	97.4	
	-02	3.92	3.14 - 4.70	3.92	2.55	38	100		
Siemens (BG, SI)	-01	2.64	2.11 - 3.17	2.64	4.96	33	100	100	
	-02	4.10	3.28 - 4.92	4.10	4.29	33	100		
Siemens (Dade Behring)	-01	2.46	1.97 - 2.95	2.46	2.89	29	100	100	
	-02	3.93	3.14 - 4.72	3.93	2.19	29	100		
Roche (immunological method)	-01	2.63	2.10 - 3.16	2.63	5.97	68	98.5	98.5	
	-02	4.02	3.22 - 4.82	4.02	4.15	68	98.5		
Roche (BCG method)	-01	2.84	2.27 - 3.41	2.84	3.17	224	99.6	98.7	
	-02	4.11	3.29 - 4.93	4.11	2.31	224	98.7		
other providers	-01	2.80	2.24 - 3.36	2.80	9.82	29	89.7	89.7	
	-02	3.99	3.19 - 4.79	3.99	6.52	29	93.1		

Rate of success: 97,9%



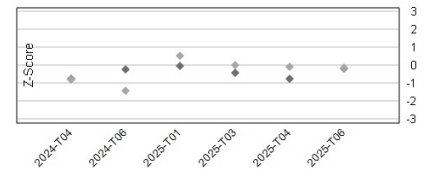
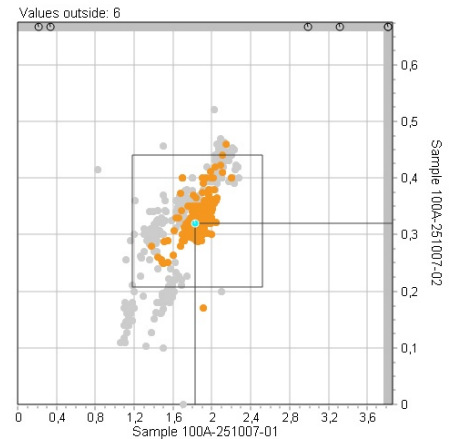
Bilirubin (mg/dl, N = 579)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	4.48	3.49 - 5.47	4.48	2.77	70	100	100	
	-02	0.978	0.763 - 1.19	0.978	3.99	70	100	100	
Beckman (Olympus) AU-System	-01	4.68	3.65 - 5.71	4.68	2.18	45	97.8	93.3	
	-02	1.09	0.850 - 1.33	1.09	2.84	45	93.3	93.3	
Siemens (BW)	-01	4.82	3.76 - 5.88	4.82	2.53	36	100	100	
	-02	0.964	0.752 - 1.18	0.964	3.63	36	100	100	
Siemens (BG, SI)	-01	4.73	3.69 - 5.77	4.73	6.66	36	97.2	91.7	
	-02	1.01	0.788 - 1.23	1.01	8.42	36	94.4	94.4	
Roche	-01	4.09	3.19 - 4.99	4.09	2.69	357	99.7	98.3	
	-02	0.843	0.658 - 1.03	0.843	4.74	357	98.3	98.3	
other providers	-01	4.56	3.56 - 5.56	4.56	6.73	35	97.1	88.6	
	-02	0.997	0.778 - 1.22	0.997	14.2	35	88.6	88.6	

Rate of success: 97,2%



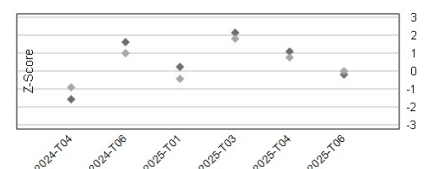
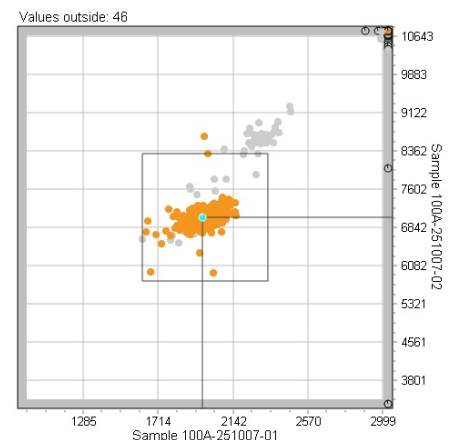
Bilirubin conj. (mg/dl, N = 512)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	1.40	0.896 - 1.90	1.40	3.36	64	100	100	
	-02	0.301	0.193 - 0.409	0.301	4.65	64	100	100	
Beckman (Olympus) AU-System	-01	1.54	0.986 - 2.09	1.54	4.61	40	97.5	92.5	
	-02	0.196	0.125 - 0.267	0.196	11.7	40	92.5	92.5	
Siemens Atellica CH / Advia	-01	1.78	1.14 - 2.42	1.78	7.47	30	100	100	
	-02	0.348	0.223 - 0.473	0.348	10.1	30	100	100	
Siemens (BW)	-01	1.14	0.730 - 1.55	1.14	3.68	27	100	96.3	
	-02	0.156	0.100 - 0.212	0.156	17.9	27	96.3	96.3	
Roche (c303)	-01	1.97	1.26 - 2.68	1.97	11.3	116	99.1	97.4	
	-02	0.401	0.257 - 0.545	0.401	11.5	116	97.4	97.4	
Roche	-01	1.85	1.18 - 2.52	1.85	5.78	207	99.5	98.6	
	-02	0.324	0.207 - 0.441	0.324	8.95	207	98.6	98.6	
other providers	-01	1.51	0.966 - 2.05	1.51	20.7	28	85.7	64.3	
	-02	0.303	0.194 - 0.412	0.303	37.0	28	64.3	64.3	

Rate of success: 96,1%



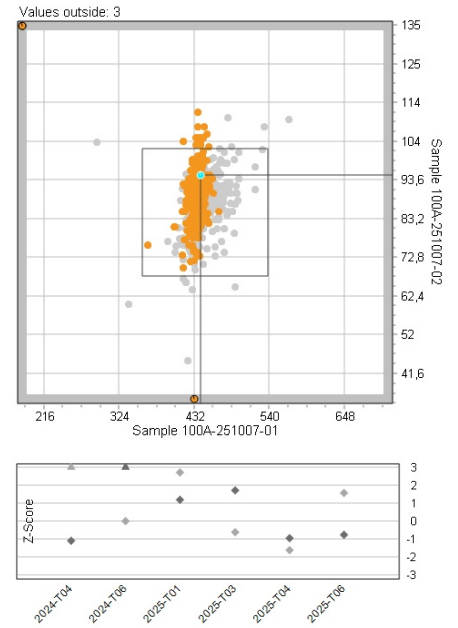
CHE (U/l, N = 394)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	2298	1884 - 2712	2298	3.37	46	97.8	97.8	
	-02	8595	7048 - 10142	8595	2.47	46	100	100	
Siemens	-01	3219	2640 - 3798	3219	4.57	46	100	97.8	
	-02	11105	9106 - 13104	11105	5.85	46	97.8	97.8	
Beckman (Olympus)	-01	1913	1569 - 2257	1913	4.70	26	92.3	92.3	
	-02	6897	5656 - 8138	6897	4.34	26	96.2	96.2	
Roche	-01	1983	1626 - 2340	1983	3.72	276	99.3	98.9	
	-02	7040	5773 - 8307	7040	2.07	276	98.9	98.9	

Rate of success: 98,2%



CK (U/l, N = 558)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott (RMV)	-01	448	358 - 538	459	2.81	67	100	95.5	
	-02	84.6	67.7 - 102	88.3	7.13	67	95.5		
Beckmann (Olympus)	-01	448	358 - 538	477	3.63	47	95.7	91.5	
	-02	84.6	67.7 - 102	88.8	8.38	47	91.5		
Siemens (Dimension)	-01	448	358 - 538	431	2.03	34	100	100	
	-02	84.6	67.7 - 102	86.7	7.52	34	100		
Siemens (BG, SI)	-01	448	358 - 538	431	2.18	37	100	91.9	
	-02	84.6	67.7 - 102	82.2	10.2	37	91.9		
Ortho (Vitros)	-01	448	358 - 538	292	0.000	1	0.000	0.000	
	-02	84.6	67.7 - 102	104	0.000	1	0.000		
Roche - Integra	-01	448	358 - 538	437	2.63	43	97.7	97.7	
	-02	84.6	67.7 - 102	87.2	7.78	43	97.7		
Roche - other devices	-01	448	358 - 538	437	1.85	311	99.7	95.2	
	-02	84.6	67.7 - 102	89.5	7.42	311	95.2		
other provider	-01	448	358 - 538	455	6.11	18	100	94.4	
	-02	84.6	67.7 - 102	91.6	8.90	18	94.4		

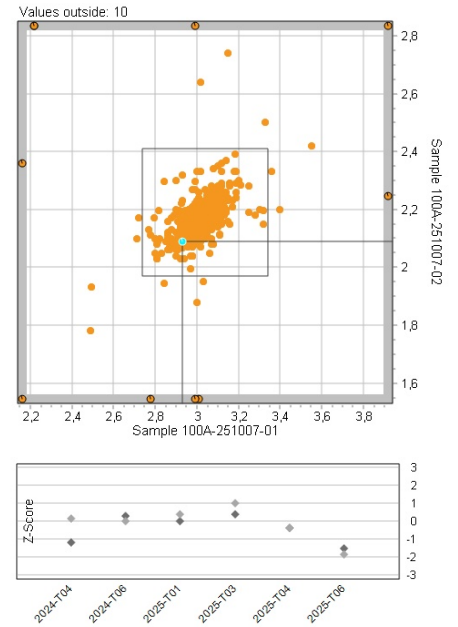
Rate of success: 95%



Calcium (mmol/l, N = 589)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
ionized Calcium (1)	-01		Sample not evaluated			2			
	-02		Sample not evaluated			2			
RMV	-01	3.04	2.74 - 3.34	3.02	2.38	587	97.8	96.1	
	-02	2.19	1.97 - 2.41	2.17	2.49	587	97.1		

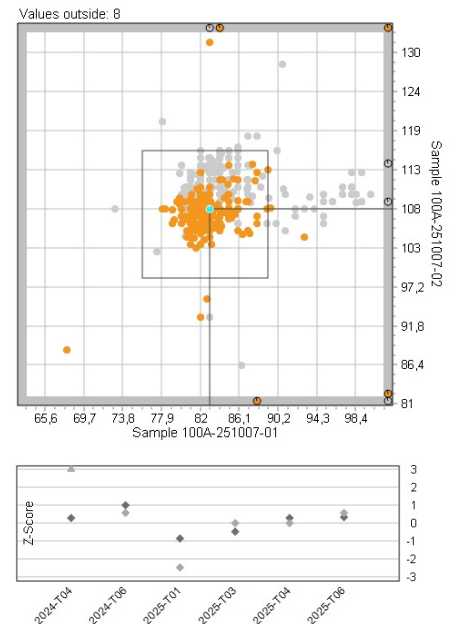
(1) In individual cases is a statistically valid valuation with consensus value not given, because size of the collective < 8 values.

Rate of success: 96,1%



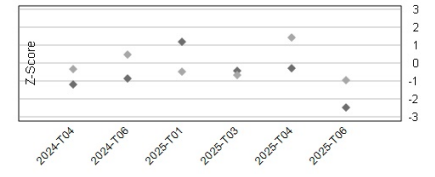
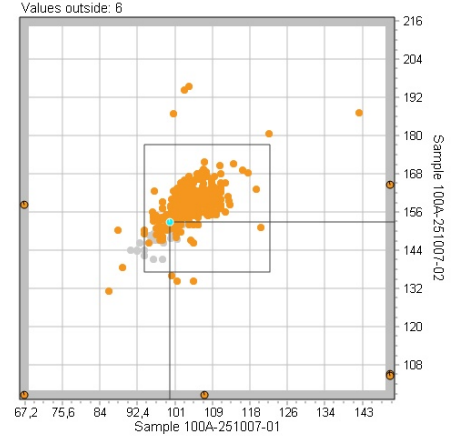
Chloride (mmol/l, N = 494)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens (Dade Behring) Dimension+	-01	95.5	87.9 - 103	95.5	3.66	30	96.7	96.7	
	-02	114	105 - 123	109	1.94	30	100		
Roche - without Integra	-01	82.5	75.9 - 89.1	82.6	1.89	271	98.2	96.3	
	-02	107	98.4 - 116	107	1.65	271	97.0		
Roche - Integra System	-01	87.0	80.0 - 94.0	87.0	3.13	16	93.8	93.8	
	-02	114	105 - 123	110	2.00	16	100		
Siemens Atellica CH	-01	82.5	75.9 - 89.1	83.7	1.84	31	96.8	93.5	
	-02	114	105 - 123	110	1.80	31	96.8		
other providers	-01	82.5	75.9 - 89.1	82.8	2.37	146	97.3	93.8	
	-02	114	105 - 123	112	2.49	146	95.9		

Rate of success: 95,3%



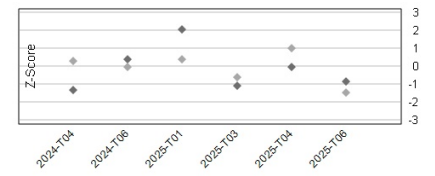
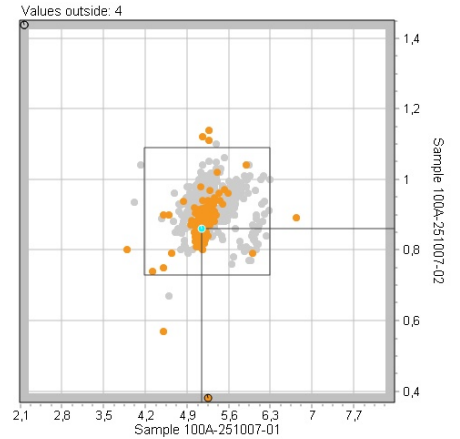
Cholesterol (mg/dl, N = 547)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens Dimension / Vista	-01	108	94.0 - 122	98.1	3.63	34	88.2	88.2	
other providers	-02	157	137 - 177	149	3.13	34	100		
	-01	108	94.0 - 122	103	3.31	513	98.2	96.7	
	-02	157	137 - 177	157	2.71	513	97.5		

Rate of success: 96,2%



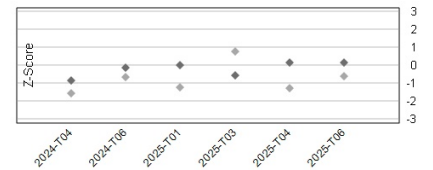
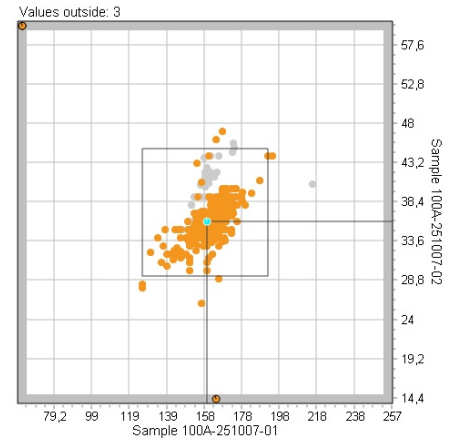
Creatinine (mg/dl, N = 636)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott Architect- Jaffé	-01	5.24	4.19 - 6.29	5.55	2.74	28	100	100	
	-02	0.911	0.729 - 1.09	0.935	4.60	28	100		
Abbott Alinity- Jaffé	-01	5.24	4.19 - 6.29	5.66	2.90	29	100	100	
	-02	0.911	0.729 - 1.09	0.929	5.49	29	100		
Siemens (Dade Behring) -Jaffé	-01	6.04	4.83 - 7.25	6.04	2.14	33	100	100	
	-02	0.911	0.729 - 1.09	0.844	6.52	33	100		
Olympus AU system - enzymatic	-01	5.24	4.19 - 6.29	5.25	3.09	16	100	100	
	-02	0.911	0.729 - 1.09	0.898	2.56	16	100		
Ortho (Vitros)	-01	5.24	4.19 - 6.29	5.16	0.000	1	100	100	
	-02	0.911	0.729 - 1.09	0.994	0.000	1	100		
Siemens Atellica / Advia, Jaffé	-01	5.24	4.19 - 6.29	5.74	2.37	20	100	100	
	-02	0.911	0.729 - 1.09	0.979	3.27	20	100		
other devices Jaffé-methods	-01	5.24	4.19 - 6.29	5.15	3.69	322	98.4	97.8	
	-02	0.911	0.729 - 1.09	0.941	5.10	322	98.4		
other methods	-01	5.24	4.19 - 6.29	5.19	2.00	187	98.9	96.3	
	-02	0.911	0.729 - 1.09	0.887	3.83	187	97.3		

Rate of success: 97,8%



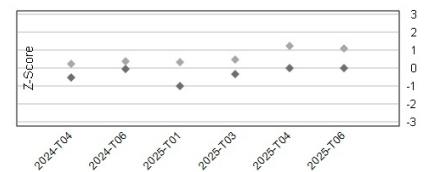
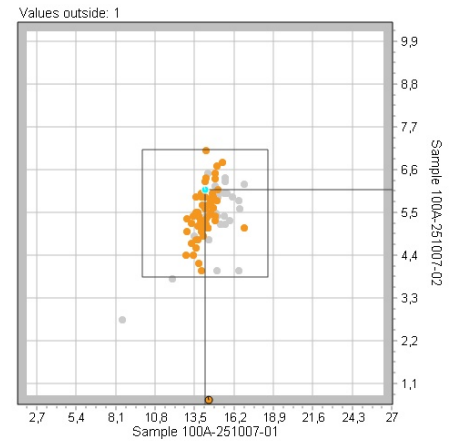
GGT (U/l, N = 584)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Olympus	-01	159	126 - 192	159	2.56	31	100	100	
	-02	37.1	29.3 - 44.9	36.2	2.64	31	100	100	
Ortho (Vitros)	-01	159	126 - 192	216	0.000	1	0.000	0.000	
	-02	37.1	29.3 - 44.9	40.6	0.000	1	100	100	
Siemens (BG)	-01	159	126 - 192	166	3.37	7	100	100	
	-02	37.1	29.3 - 44.9	38.7	3.57	7	100	100	
Siemens (Dimension)	-01	159	126 - 192	160	2.56	35	100	100	
	-02	41.2	32.5 - 49.9	41.2	5.29	35	100	100	
other providers	-01	159	126 - 192	163	3.82	510	99.4	98.0	
	-02	37.1	29.3 - 44.9	36.2	4.72	510	98.2	98.2	

Rate of success: 98,1%



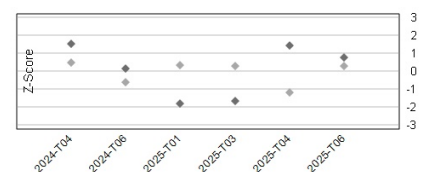
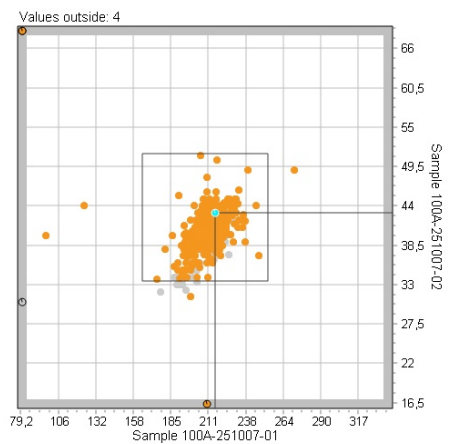
GLDH (U/l, N = 97)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Roche	-01	14.2	9.94 - 18.5	14.2	4.06	65	100	98.5	
	-02	5.48	3.84 - 7.12	5.48	10.3	65	98.5	98.5	
other providers	-01	15.1	10.6 - 19.6	15.1	6.55	32	93.8	90.6	
	-02	5.49	3.84 - 7.14	5.49	13.2	32	90.6	90.6	

Rate of success: 95,9%



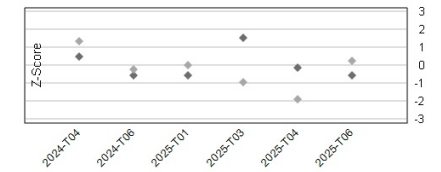
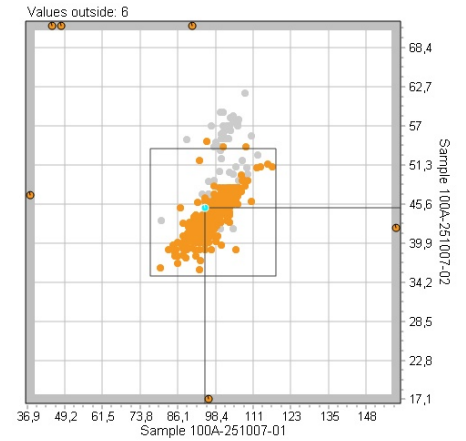
GOT (ASAT) (U/l, N = 597)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Ortho (Vitros)	-01	209	165 - 253	196	0.000	1	100	0.000	
	-02	42.4	33.5 - 51.3	32.2	0.000	1	0.000	0.000	
Roche Integra-System	-01	209	165 - 253	208	6.97	45	97.8	97.8	
	-02	37.0	29.2 - 44.8	37.0	8.00	45	100	100	
other providers	-01	209	165 - 253	211	4.41	551	99.1	98.7	
	-02	42.4	33.5 - 51.3	40.7	5.26	551	99.3	99.3	

Rate of success: 98,5%



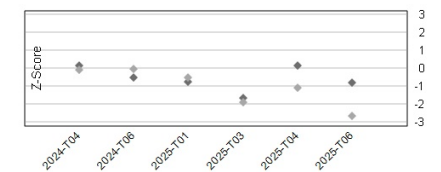
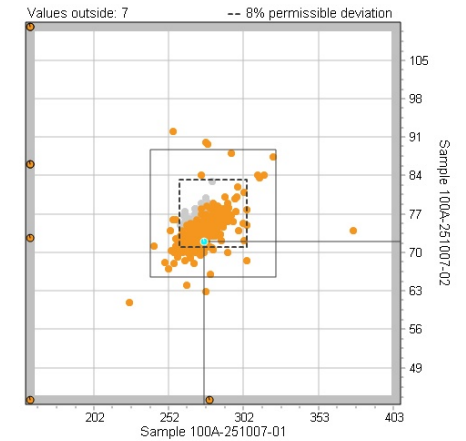
GPT (ALAT) (U/l, N = 601)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens (Dimension)	-01	97.7	77.2 - 118	101	2.30	35	100	100	
Siemens (BG, SI)	-02	56.1	44.3 - 67.9	56.1	3.40	35	100	100	
Siemens (BG, SI)	-01	97.7	77.2 - 118	102	4.60	37	100	97.3	
Siemens (BG, SI)	-02	44.4	35.1 - 53.7	47.9	4.43	37	97.3	97.3	
Ortho (Vitros)	-01	97.7	77.2 - 118	80.6	0.000	1	100	100	
Ortho (Vitros)	-02	44.4	35.1 - 53.7	43.3	0.000	1	100	100	
other providers	-01	97.7	77.2 - 118	97.1	5.06	528	99.2	98.3	
other providers	-02	44.4	35.1 - 53.7	43.6	5.60	528	98.7	98.7	

Rate of success: 98,3%



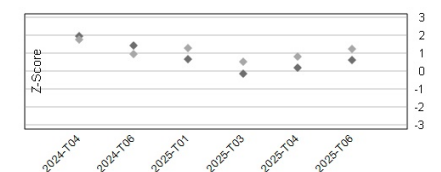
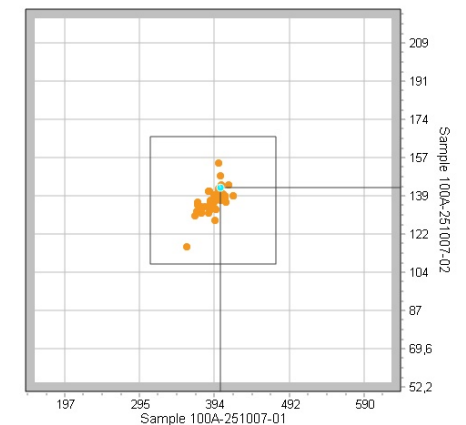
Glucose (mg/dl, N = 619)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens (Dade-Behring) Dimension+	-01	282	240 - 324	271	2.56	32	100	100	
Siemens (Dade-Behring) Dimension+	-02	77.1	65.5 - 88.7	76.5	2.26	32	100	100	
other providers (RMV)	-01	282	240 - 324	275	2.71	587	98.6	97.6	
other providers (RMV)	-02	77.1	65.5 - 88.7	73.8	2.59	587	98.5	98.5	

Rate of success: 97,7%



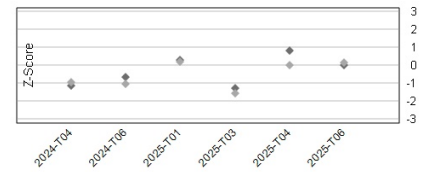
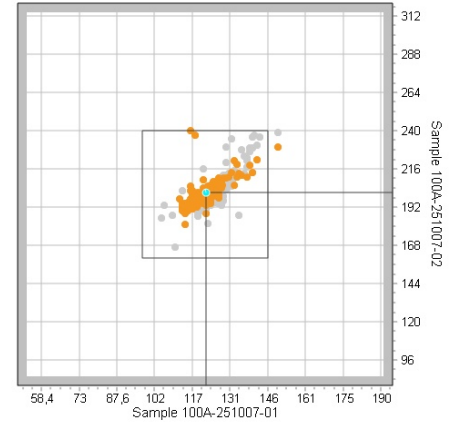
HBDH (U/l, N = 44)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers	-01	392	310 - 474	392	3.75	44	100	100	
all providers	-02	137	108 - 166	137	3.60	44	100	100	

Rate of success: 100%



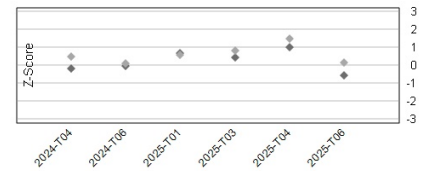
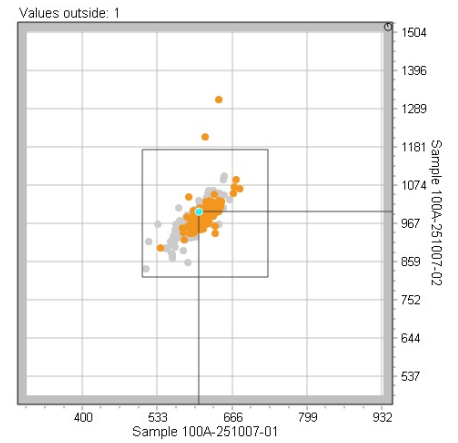
IgA (mg/dl, N = 242)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens (BG, SI) -Nephelometrie	-01 -02	138 230	110 - 166 184 - 276	138 230	3.95 3.07	13 13	100 100	100	
Roche	-01 -02	122 200	97.6 - 146 160 - 240	122 200	4.30 3.30	145 145	99.3 100	99.3	
other providers	-01 -02	126 201	101 - 151 161 - 241	126 201	4.30 4.73	84 84	100 100	100	

Rate of success: 99,6%



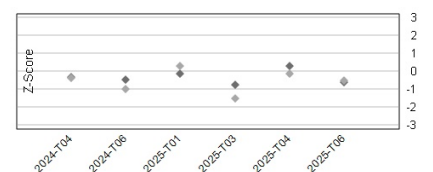
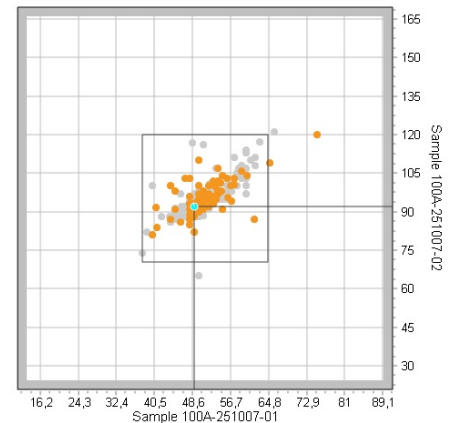
IgG (mg/dl, N = 255)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens (BG, SI) -Nephelometrie	-01 -02	629 1036	516 - 742 850 - 1222	629 1036	3.15 3.56	15 15	100 100	100	
Roche	-01 -02	618 995	507 - 729 816 - 1174	618 995	3.06 2.74	148 148	100 98.6	98.6	
other providers	-01 -02	590 964	484 - 696 790 - 1138	590 964	4.56 4.51	92 92	97.8 97.8	97.8	

Rate of success: 98,4%



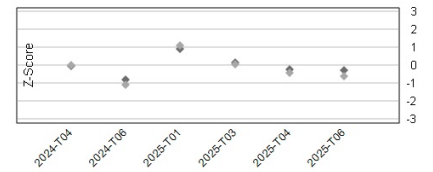
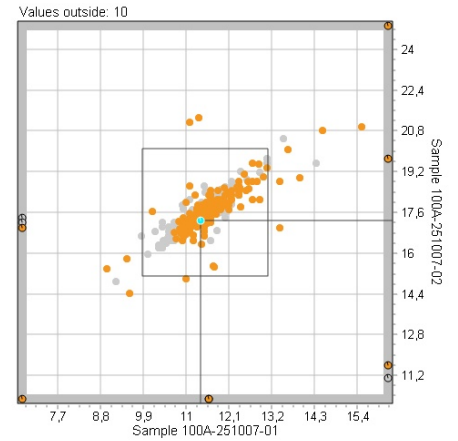
IgM (mg/dl, N = 237)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Siemens (BG, SI) -Nephelometrie	-01 -02	60.0 110	44.4 - 75.6 81.4 - 139	60.0 110	4.13 4.66	14 14	100 100	100	
Roche	-01 -02	50.3 94.2	37.2 - 63.4 69.7 - 119	50.3 94.2	6.84 4.36	140 140	100 99.3	99.3	
other providers	-01 -02	51.3 95.2	38.0 - 64.6 70.4 - 120	51.3 95.2	7.19 6.24	83 83	97.6 98.8	96.4	

Rate of success: 98,3%



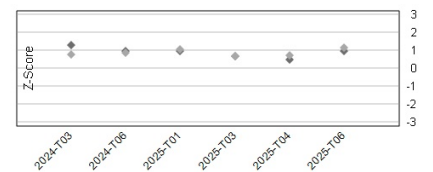
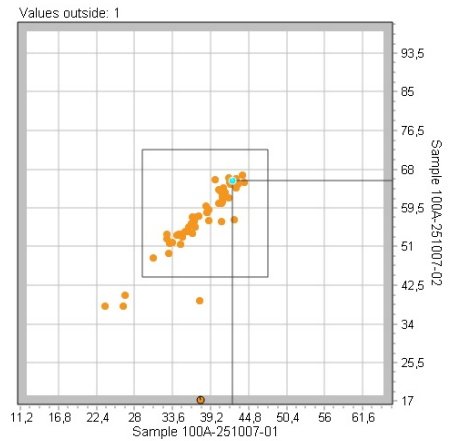
Iron ($\mu\text{mol/l}$, N = 500)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	11.7	10.1 - 13.3	11.7	3.62	67	97.0	97.0	
	-02	18.0	15.5 - 20.5	18.0	3.03	67	100	100	
Beckman (Olympus)	-01	11.5	9.89 - 13.1	11.5	4.71	41	95.1	92.7	
	-02	17.4	15.0 - 19.8	17.4	3.61	41	92.7	92.7	
Siemens (BG, SI)	-01	11.1	9.55 - 12.7	11.1	4.48	35	91.4	91.4	
	-02	17.5	15.1 - 20.0	17.5	2.05	35	100	100	
Siemens (Dade Behring)	-01	10.8	9.29 - 12.3	10.8	2.32	34	100	100	
	-02	16.7	14.4 - 19.0	16.7	1.34	34	100	100	
other providers	-01	11.5	9.89 - 13.1	11.5	3.03	323	95.7	94.4	
	-02	17.6	15.1 - 20.1	17.6	2.66	323	96.9	96.9	

Rate of success: 94,8%



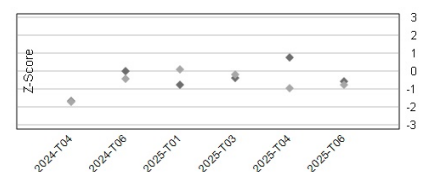
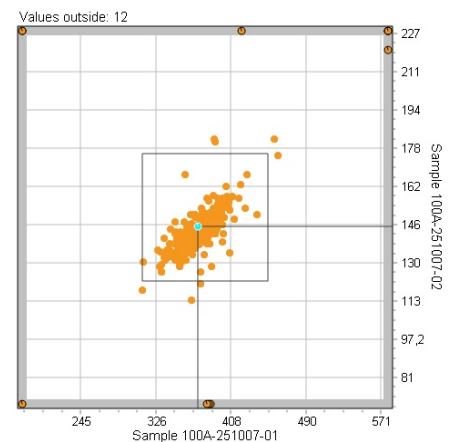
Iron binding Capacity ($\mu\text{mol/l}$, N = 58)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers	-01	38.4	29.2 - 47.6	38.4	10.8	58	94.8	91.4	
	-02	58.3	44.3 - 72.3	58.3	10.8	58	91.4	91.4	

Rate of success: 91,4%



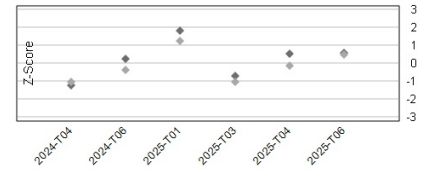
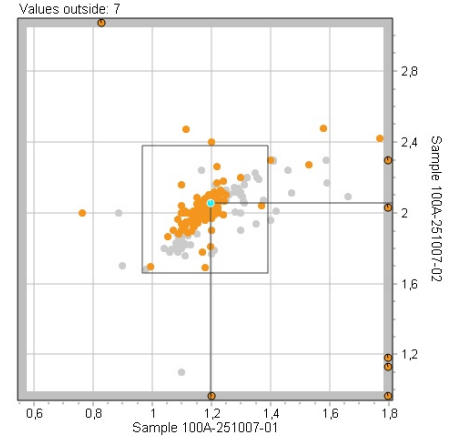
LDH (U/l, N = 557)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers (RMV)	-01	380	312 - 448	379	3.61	557	98.2	96.6	
	-02	149	122 - 176	144	3.70	557	96.9	96.9	

Rate of success: 96,6%



Lactate (mmol/l, N = 364)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott / Diasys	-01	1.20	0.984 - 1.42	1.20	10.3	43	95.3	95.3	
	-02	1.97	1.62 - 2.32	1.97	9.70	43	100		
Enzym. amperometr. method)	-01	1.35	1.11 - 1.59	1.35	13.7	17	88.2	88.2	
	-02	2.07	1.70 - 2.44	2.07	7.97	17	100		
Siemens	-01	1.21	0.992 - 1.43	1.21	4.96	35	100	97.1	
	-02	2.05	1.68 - 2.42	2.05	3.46	35	97.1		
other providers	-01	1.18	0.968 - 1.39	1.18	2.97	269	95.9	94.8	
	-02	2.02	1.66 - 2.38	2.02	2.97	269	97.0		

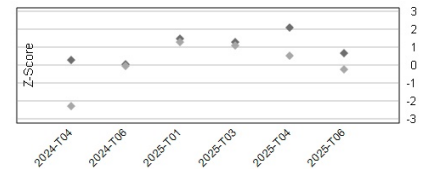
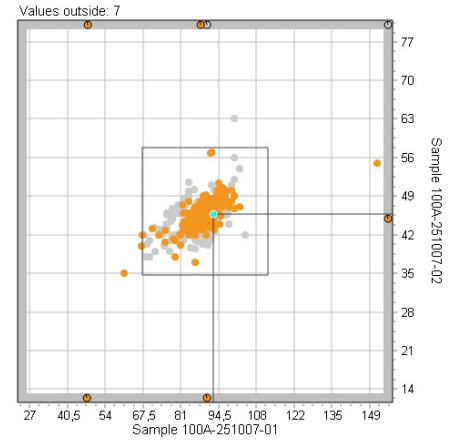
Rate of success: 94,8%



Lipase (U/l, N = 528)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott Alinity	-01	78.4	58.8 - 98.0	78.4	10.6	34	94.1	94.1	
	-02	42.2	31.7 - 52.8	42.2	4.88	34	97.1		
Abbott Architect	-01	91.1	68.3 - 114	91.1	4.39	29	100	96.6	
	-02	45.7	34.3 - 57.1	45.7	4.84	29	96.6		
Siemens Atellica CH	-01	94.0	70.5 - 118	94.0	3.84	29	100	100	
	-02	47.9	35.9 - 59.9	47.9	4.30	29	100		
Siemens (other)	-01	81.4	61.1 - 102	81.4	3.93	35	100	100	
	-02	47.4	35.6 - 59.3	47.4	3.33	35	100		
Beckman (Olympus)	-01	90.5	67.9 - 113	90.5	3.03	40	100	100	
	-02	42.4	31.8 - 53.0	42.4	3.63	40	100		
Ortho (Vitros) (1)	-01	1119	839 - 1399	1119	0.000	1			
	-02	282	212 - 353	282	0.000	1			
other providers	-01	89.9	67.4 - 112	89.9	4.47	360	98.1	97.5	
	-02	46.2	34.7 - 57.8	46.2	4.18	360	99.2		

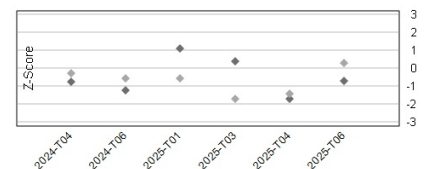
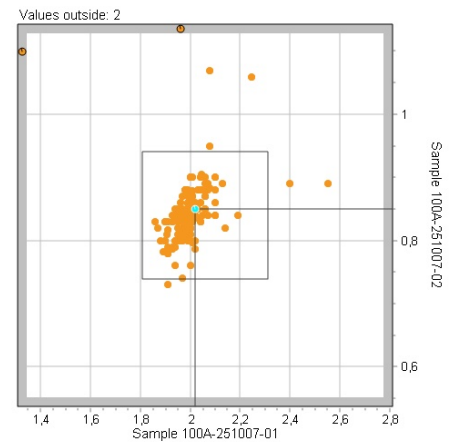
Rate of success: 97,7%

(1) In individual cases is a statistically valid valuation with consensus value not given, because size of the collective < 8 values.



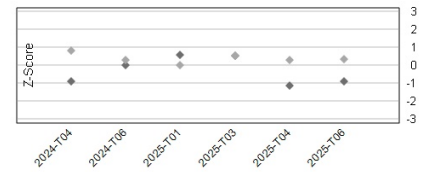
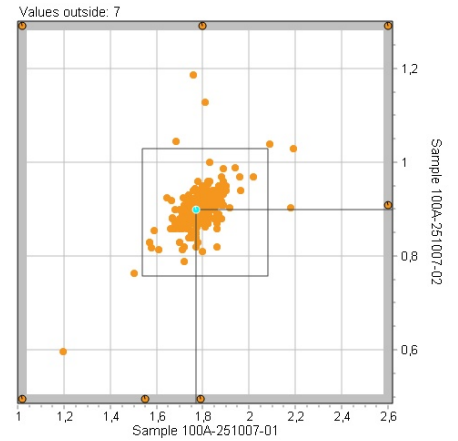
Lithium (mmol/l, N = 150)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers (RMV)	-01	2.06	1.81 - 2.31	1.99	2.81	150	98.0	94.7	
	-02	0.840	0.739 - 0.941	0.843	4.51	150	96.0		

Rate of success: 94,7%



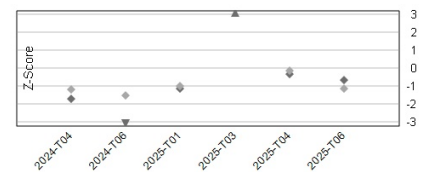
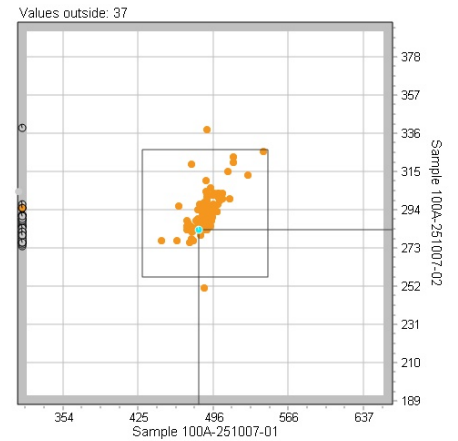
Magnesium (mmol/l, N = 449)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers (RMV)	-01	1.81	1.54 - 2.08	1.78	2.42	449	98.0	96.7	
	-02	0.892	0.758 - 1.03	0.902	2.77	449	97.6		

Rate of success: 96,7%



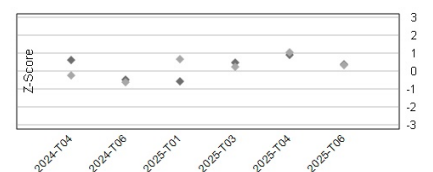
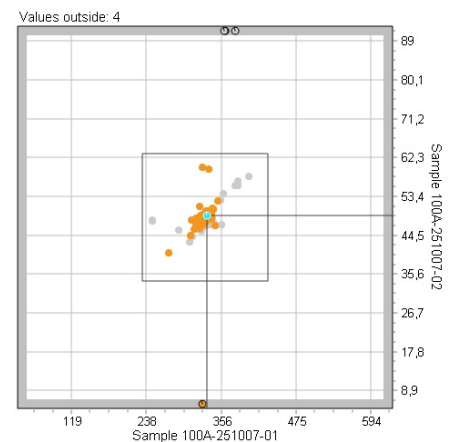
Osmolality (mOsmol/kg, N = 149)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
calculated	-01	281	247 - 315	281	2.53	37	100	97.3	
	-02	285	251 - 319	285	2.78	37	97.3		
other methods	-01	488	429 - 547	488	1.86	112	99.1	97.3	
	-02	292	257 - 327	292	2.74	112	98.2		

Rate of success: 97,3%



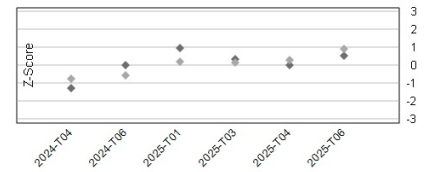
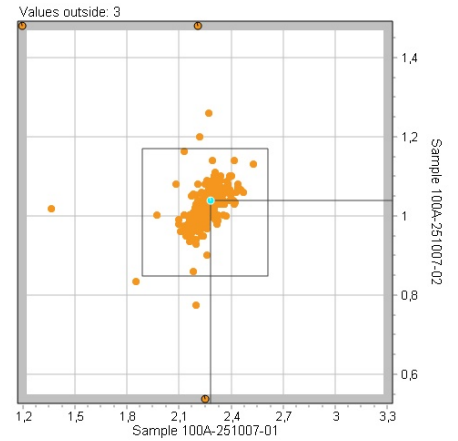
Pancreas Amylase (U/l, N = 138)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Roche	-01	331	232 - 430	331	2.26	102	100	98.0	
	-02	48.6	34.0 - 63.2	48.6	2.49	102	98.0		
other providers	-01	340	238 - 442	340	7.85	36	100	94.4	
	-02	48.7	34.1 - 63.3	48.7	8.07	36	94.4		

Rate of success: 97,1%



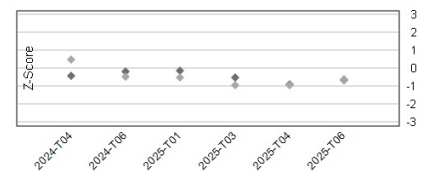
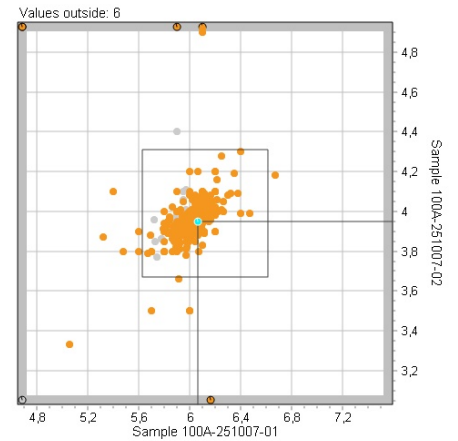
Phosphate (mmol/l, N = 460)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers	-01	2.25	1.89 - 2.61	2.25	2.58	460	99.3	98.3	
	-02	1.01	0.848 - 1.17	1.01	3.27	460	98.5		

Rate of success: 98,3%



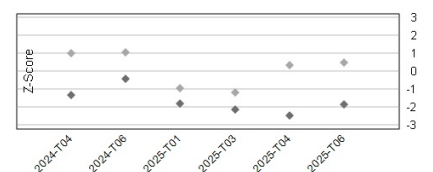
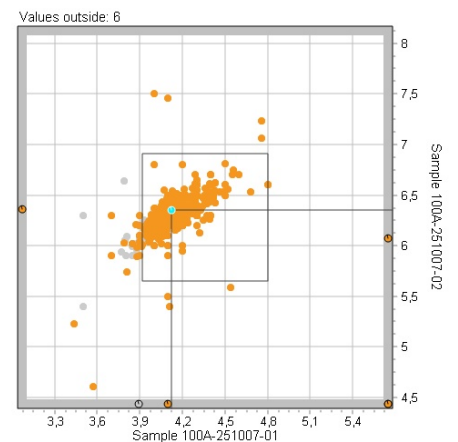
Potassium (mmol/l, N = 591)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
R.KN, OR, TS	-01	6.12	5.63 - 6.61	5.91	0.795	8	100	87.5	
	-02	3.99	3.67 - 4.31	4.04	2.33	8	87.5		
Siemens Atellica CH	-01	6.12	5.63 - 6.61	5.91	1.81	32	96.9	96.9	
	-02	3.99	3.67 - 4.31	3.92	1.79	32	100		
other providers	-01	6.12	5.63 - 6.61	6.02	1.51	551	98.4	96.7	
	-02	3.99	3.67 - 4.31	3.95	1.65	551	97.8		

Rate of success: 96,6%



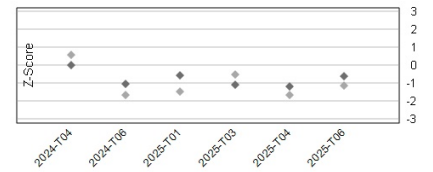
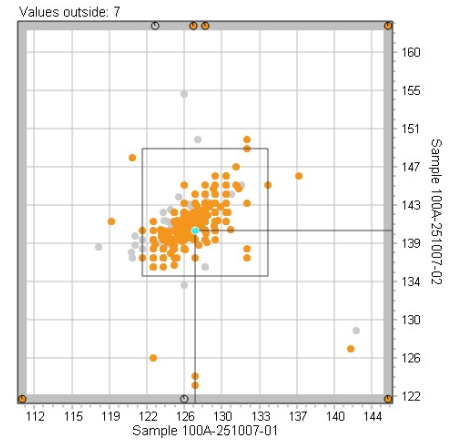
Protein (g/dl, N = 581)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Roche Integra System	-01	3.93	3.54 - 4.32	3.93	2.60	41	95.1	92.7	
	-02	6.28	5.65 - 6.91	6.10	2.67	41	95.1		
Ortho (Vitros)	-01	4.36	3.92 - 4.80	3.79	0.000	1	0.000	0.000	
	-02	6.28	5.65 - 6.91	6.64	0.000	1	100		
other providers	-01	4.36	3.92 - 4.80	4.13	3.10	539	95.0	93.5	
	-02	6.28	5.65 - 6.91	6.31	2.36	539	97.8		

Rate of success: 93,3%



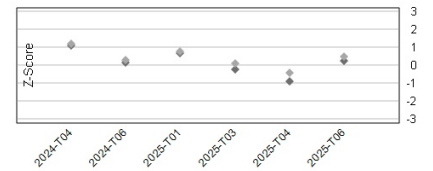
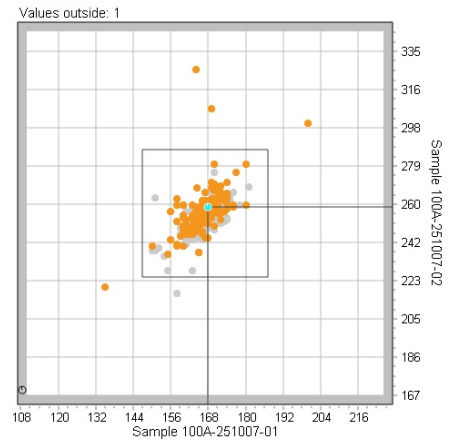
Sodium (mmol/l, N = 587)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
R.KN, OR, TS	-01	128	122 - 134	126	0.000	7	100	85.7	
	-02	142	135 - 149	143	1.50	7	85.7		
ISE, direct potentiometry	-01	128	122 - 134	126	2.21	46	91.3	82.6	
	-02	142	135 - 149	141	1.70	46	89.1		
Roche Interga Systeme	-01	128	122 - 134	125	1.38	31	93.5	93.5	
	-02	142	135 - 149	140	1.28	31	100		
other providers	-01	128	122 - 134	127	1.23	503	98.6	97.4	
	-02	142	135 - 149	141	1.23	503	98.2		

Rate of success: 95,9%



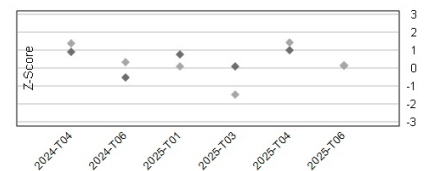
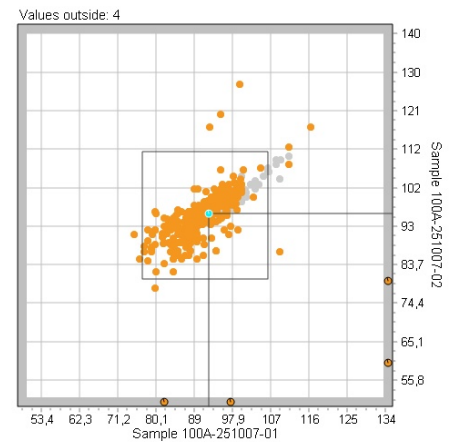
Transferrine (mg/dl, N = 321)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	167	147 - 187	167	2.26	38	100	100	
	-02	254	224 - 284	254	2.63	38	100		
Beckman (Olympus)	-01	163	143 - 183	163	4.09	27	96.3	96.3	
	-02	247	217 - 277	247	2.62	27	96.3		
Siemens Dimension +	-01	161	142 - 180	161	3.86	18	100	100	
	-02	247	217 - 277	247	4.90	18	100		
Siemens other devices	-01	169	149 - 189	169	3.02	32	100	100	
	-02	255	224 - 286	255	3.17	32	100		
Roche / other providers	-01	167	147 - 187	167	2.71	206	99.0	98.1	
	-02	256	225 - 287	256	2.56	206	98.1		

Rate of success: 98,4%



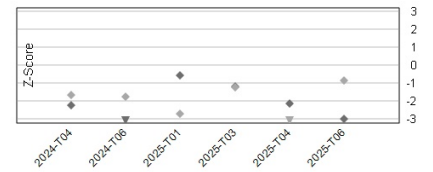
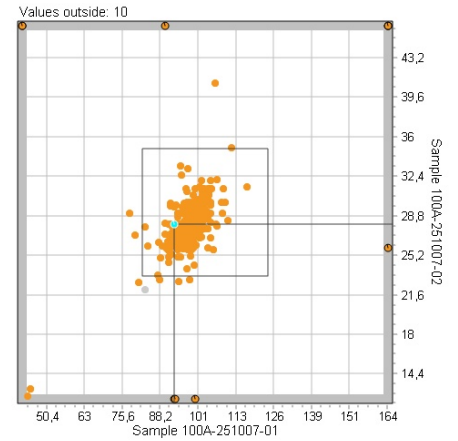
Triglycerides (mg/dl, N = 550)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Ortho (Vitros)	-01	91.5	76.9 - 106	95.6	0.000	1	100	100	
	-02	95.5	80.2 - 111	103	0.000	1	100		
Siemens Atellica CH	-01	102	85.7 - 118	102	4.56	29	100	100	
	-02	95.5	80.2 - 111	102	4.42	29	100		
other providers	-01	91.5	76.9 - 106	91.2	5.47	520	98.5	97.3	
	-02	95.5	80.2 - 111	95.8	4.31	520	98.1		

Rate of success: 97,5%



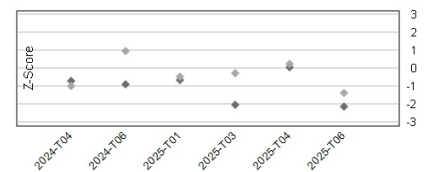
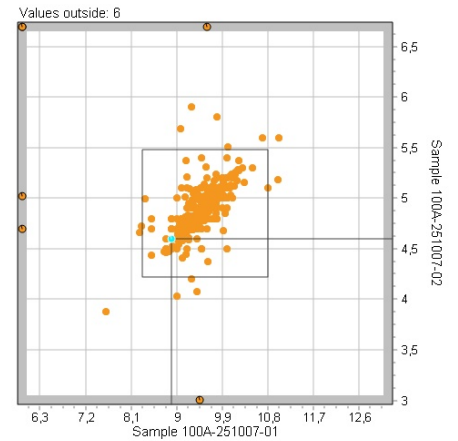
Urea (mg/dl, N = 596)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Ortho (Vitros)	-01	103	82.4 - 124	83.2	0.000	1	100	0.000	
	-02	29.1	23.3 - 34.9	22.1	0.000	1	0.000		
all providers	-01	103	82.4 - 124	97.4	3.44	595	98.2	96.6	
	-02	29.1	23.3 - 34.9	27.7	4.51	595	97.1		

Rate of success: 96,5%



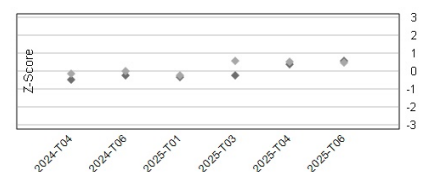
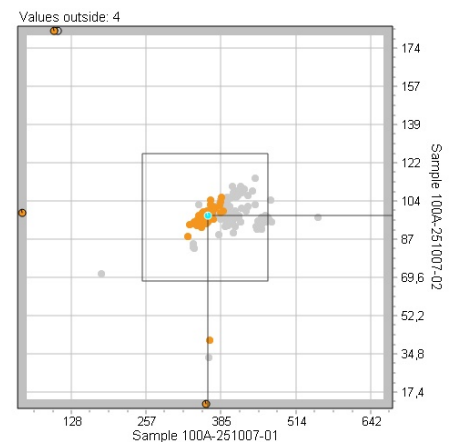
Uric Acid (mg/dl, N = 584)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
all providers (RMV)	-01	9.58	8.33 - 10.8	9.44	3.33	584	98.5	96.7	
	-02	4.85	4.22 - 5.48	4.86	3.74	584	97.6		

Rate of success: 96,7%



alpha-Amylase (U/l, N = 336)									
Collective	Sample 100A-251007	Target value	Target range	Participants collective			Rate (%)		
				AVG	CV	Num.	Sam.	total	
Abbott	-01	403	282 - 524	403	1.65	48	100	100	
	-02	95.9	67.1 - 125	95.9	1.55	48	100		
Beckman (Olympus)	-01	382	267 - 497	382	3.40	35	97.1	97.1	
	-02	102	71.4 - 133	102	2.69	35	97.1		
Siemens (Dade Behring)	-01	456	319 - 593	456	1.57	24	100	100	
	-02	94.8	66.4 - 123	94.8	1.84	24	100		
Siemens (BG, SI)	-01	413	289 - 537	413	2.31	27	100	100	
	-02	108	75.6 - 140	108	1.81	27	100		
Ortho (Vitros) (1)	-01	181	127 - 235	181	0.000	1			
	-02	71.4	50.0 - 92.8	71.4	0.000	1			
Roche	-01	358	251 - 465	358	1.89	185	98.9	97.8	
	-02	97.1	68.0 - 126	97.1	1.91	185	98.4		
other providers	-01	401	281 - 521	401	12.4	16	93.8	87.5	
	-02	96.1	67.3 - 125	96.1	10.7	16	93.8		

Rate of success: 97,9%



(1) In individual cases is a statistically valid valuation with consensus value not given, because size of the collective < 8 values.