

Klinické materiály

5.1.

	SE 101021	SE 704121	SE 404107	SE 404108	SE 404109	NIST 909b		NIST 2670	
	Urine-TE	Serum	Whole Blood	Whole Blood	Whole Blood	Human Serum-I, II		Urine-I	Urine-II
	5ml	3 ml	10x5ml	10x5ml	10x5ml	3btl.	3btl.	2x30ml	2x30ml
						mmol/l	mmol/l	mg/l	mg/l
Al	100 µg/l	67 µg/l	-	(30 µg/l)	(60 µg/l)	-	-	(0,18)	(0,18)
As	142 µg/l	-	-	(10 µg/l)	(25 µg/l)	-	-	(0,06)	0,48
Au	(24 ng/l)	-	-	-	-	-	-	(0,008 µg/l)	(0,24 µg/l)
Be	4,9 µg/l	-	-	(5 µg/l)	(10 µg/l)	-	-	(<0,0005)	(0,033)
Bi	20,1 µg/l	-	-	(5 µg/l)	(10 µg/l)	-	-	-	-
Ca	(107 mg/l)	89 mg/l	-	-	-	2,218	3,532	0,105 g/l	0,105 g/l
Cd	4,6µg/l	-	0,7 µg/l	6,4 µg/l	10,7 µg/l	-	-	(0,0004)	0,088
Cl	(127 mmol/l)	-	-	-	-	89,11	119,43	(4,4 g/l)	(4,4 g/l)
Co	10 µg/l	0,2 µg/l	<1,0 µg/l	5 µg/l	10 µg/l	-	-	-	-
Cr	19,7 µg/l	1,3 µg/l	1,2 µg/l	7,5 µg/l	12,5 µg/l	-	-	(0,013)	0,085
Cu	78 µg/l	1,3 mg/l	-	-	-	-	-	0,13	0,37
F	4,0 µg/l	100 µg/l	-	(100 µg/l)	(200 µg/l)	-	-	-	-
Hg	46,7 µg/l	-	3,0 µg/l	8,0 µg/l	14,0 µg/l	-	-	(0,002)	0,105
K	-	158 mg/l	-	-	-	3,424	6,278	(1,5 g/l)	(1,5 g/l)
Li	(10,2 mg/l)	-	-	-	-	0,6145	2,600	-	-
Mg	(1775mg/l)	20 mg/l	-	-	-	0,7634	1,918	0,063 g/l	0,063 g/l
Mn	12,3 µg/l	6,2 µg/l	9,0 µg/l	13,0 µg/l	15,0 µg/l	-	-	(0,03)	(0,33)
Mo	49,3 µg/l	-	-	(5 µg/l)	(10 µg/l)	-	-	-	-
Na	(2303 ng/l)	3200 mg/l	-	-	-	120,76	141,0	2,62 g/l	2,62 g/l
Ni	50 µg/l	3,1 µg/l	<2,0 µg/l	3,0 µg/l	8,0 µg/l	-	-	(0,07)	(0,30)
PO4 (as P)	647 mg/l	-	-	-	-	-	-	-	-
Pt	8,1	-	-	-	-	-	-	(0,008 µg/l)	(0,12 µg/l)
Pb	40,3 µg/l	-	34,0 µg/l	385,0 µg/l	660,0 µg/l	-	-	(0,01)	0,109
Sb	548 µg/l	-	-	(25 µg/l)	(75 µg/l)	-	-	-	-
Se	99 µg/l	80 µg/l	80,0 µg/l	82,0 µg/l	79,0 µg/l	-	-	0,030	0,46
Sn	34,6	-	-	-	-	-	-	-	-
Te	25,3	-	-	-	-	-	-	-	-
Tl	9,26	-	-	(5,0 µg/l)	(10 µg/l)	-	-	-	-
V	25,2	-	-	(3,0 µg/l)	(5,0 µg/l)	-	-	-	(0,12)
Zn	1141	1,48 mg/l	-	-	-	-	-	-	-
SO4	-	-	-	-	-	-	-	(1,3 g/l)	(1,3 g/l)
Urea	18,6 g/l	Fe 1,1 mg/l	-	-	-	5,51	30,75	-	-
Uric Acid	-	P 76 mg/l	-	-	-	2,809	0,7579	-	-
Cholesterol	-	S 1047 mg/l	-	-	-	3,787	6,084	-	-
Glucose	-	-	-	-	-	-	-	-	-
Phenol	300 mg/l	-	-	-	-	-	-	-	-
Formic acid	10,8 mg/l	-	-	-	-	-	-	-	-
TCA	350	-	-	-	-	-	-	-	-
1-hydroxy pyrene	55µg/l	-	-	-	-	-	-	-	-
Hippuric acid	-	-	-	-	-	-	-	-	-
Total glycerides	-	-	-	-	-	0,949	1,529	-	-
Glycerides	-	-	-	-	-	0,804	1,271	-	-
Creatinine	8663 mg/l	-	-	-	-	0,05681	0,4674	-	-

	GBW 9102	GBW 9103
	Lyophilized Human Urine	
	0,9g	0,9g
	µg/l	mg/l
As	20,1	0,36
Be	(<0,4)	0,031
Cd	(<0,3)	0,053
Cr	(12)	0,091
Cu	34	0,45
Mn	(3,6)	0,29
Ni	(7,5)	0,31
Pb	(5,0)	0,112
Se	33,7	0,44
Zn	570	2,22

	NIST 966	
	Bovine Blood	
	Set of 4 (4x2ml)	
	Level I	Level II
	µg/dL	µg/dL
Pb	1,56	25,27
Cd	(<0,4)	5,22
Hg tot.	(<0,06)	31,4
Hg inorg.	-	(14,1)
Met.Hg	-	(17,3)

	BCR 194	BCR 195	BCR 196	BCR 304
	Lyop. Bovine Blood	Lyop. Bovine Blood	Lyop. Bovine Blood	Human Serum
	5,75ml	5,75ml	5,75ml	5,3ml
	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$	mmol/l
Ca	-	-	-	2,201
Cd	0,5	5,37	12,4	-
Li	-	-	-	0,985
Mg	-	-	-	1,85
Pb	126	416	772	-

	PR B1701	PR B1702	PR B1703
	Lyop. Hum. Blood	Lyop. Hum. Blood	Lyop. Hum. Blood
	3ml	3ml	3ml
	nmol/l	nmol/l	nmol/l
Pb	0,28 $\mu\text{mol/l}$	0,97 $\mu\text{mol/l}$	2,30 $\mu\text{mol/l}$
Cd	12	56	103
Cr	15	45	90
Mn	165	319	829

	GBW 9106	GBW 9107
	Lyophilized Human Urine	
	0,6g	0,6g
	mg/l	mg/l
F	0,62	5,3
Pb	-	-

	GBW 9135	GBW 9143	GBW 9144
	Human Serum	Cattle Serum	Cattle Serum
	0,2g	4ml	4ml
	$\mu\text{g/g}$	$\mu\text{g/l}$	$\mu\text{g/l}$
Ca	85,5	-	-
Cl	3,37	-	-
Cu	1,05	-	-
Fe	1,3	-	-
F-	-	1,03	5,07
Tot.F	-	(1,07)	(5,17)
K	0,178	-	-
Mg	20,4	-	-
Na	3,12	-	-
P	0,108	-	-
P-inor.	35,5	-	-
Pb	(0,17)	-	-
Zn	1,03	-	-

NIST 2672a	
Urine	
	30ml
	30ml
	mg/l
F	-
Hg	(0,02)

	GBW 9139	GBW 9140
	Freeze-Dried Bovine Blood	
	Set	
	$\mu\text{g/l}$	$\mu\text{g/l}$
Pb	111	357
Cd	1,58	6,54

NIST 955c			
Bovine Blood			
4x2 ml			
	$\mu\text{g/dl}$	$\mu\text{g/dl}$	$\mu\text{g/dl}$
	Level I	Level II	Level III
Pb	4,04	10,30	20,59
			Level IV
			39,36

	IAEA-085	IAEA-086
	Human Hair	Human Hair
	5g	5g
	mg/kg	mg/kg
Tot.Hg	23,2	0,573
MeHg*	22,9	0,258
Ca	(929)	(1120)
Cu	(16,8)	(17,6)
Fe	79,3	123
Mg	(140)	(177)
Mn	(8,8)	(9,6)
Sc	(0,0092)	(0,014)
Se	(1,07)	(1,00)
Zn	163	167

* as inorganic Hg

GBW 7601			
Human Hair Powder			
20g			
	$\mu\text{g/g}$	$\mu\text{g/g}$	
Sb	0,095	Mg	360
As	0,28	Mn	6,3
Ba	17	Hg	0,36
Be	0,063	Mo	0,073
Bi	0,34	Ni	0,83
B	(1,3)	N	14,9%
Br	(0,36)	P	170
Ca	0,29%	K	(20)
Cd	0,11	Sm	(0,012)
Ce	0,12	Sc	0,008
Co	0,071	Se	0,60
Cr	0,37	Si	870
Cu	10,6	Ag	0,029
Dy	(0,017)	Na	152
Eu	(0,006)	Sr	24
Au	(0,0025)	S	4,3%
Eu	(0,006)	Ti	2,7
Fe	54	V	-
La	0,049	Y	0,08
Pb	8,8	Zn	190
Li	2,0		

GBW 9101			
Human Hair			
7g			
	$\mu\text{g/g}$	$\mu\text{g/g}$	
Al	13,3	K	(11,8)
Sb	(0,21)	Sc	(2,87 $\mu\text{g/kg}$)
As	0,59	Se	0,58
Ba	(5,41)	Ag	(0,35)
Br	(0,602)	Na	266
Ca	1090	Sr	4,19
Cd	0,095	S	(4,69%)
Cl	(152)	V	(0,069)
Co	0,135	Zn	189
Cr	4,77		
Cu	23,0		
I	(0,875)		
Fe	71,2		
La	(0,014)		
Pb	7,2		
Mg	105		
Mn	2,94		
Hg	2,16		
Mo	(0,58)		
Ni	3,17		
P	(184)		

	GBW 9132	GBW 9133	GBW 9134
	Bovine Blood		
	Set 3x3 ml		
	$\mu\text{g/l}$	$\mu\text{g/l}$	$\mu\text{g/l}$
Pb	112	284	386
Cd	1,05	4,22	8,84