

Component	Unit	CAL		X	Quality goal	NORIP Reference intervals																
				NFKK Ref. Serum		Calculated										Suggestions						
		Target value	Source	Target value	Bias	Gender	Age	Serum					Plasma (Li heparin)					Serum		Plasma		Comment
								Low	90% CI	High	90% CI	N	Low	90% CI	High	90% CI	N	Low	High	Low	High	
Albumin	g/L	40.52	NTP	41.5	2.1 %	FM	18-39 40-69 ≥70	36.5 36.3-36.7 34.4	47.9 47.5-48.4 33.5-34.8	1010 1248 450	35.8 35.2-36.3 34.5	47.2 46.9-48.1 45.4	452 589 244	36 48 34	48 45	 	 					
Bilirubin	umol/L	8.5	DGKC	8.97	15.1 %	FM	>=18	4.7	4.5-5.0	24	23.1-25.1	2738	5.1	4.7-5.4	26	24.3-28.4	887	5	25			
Calcium	mmol/L	2.266	NTP		1.4 %	FM	>=18	2.17	2.17-2.18	2.51	2.50-2.52	2569	2.15	2.14-2.16	2.48	2.47-2.50	1204	2.15	2.51			
Calcium, albumin corrected	mmol/L	2.2816		2.325	1.2 %	FM	18-49 ≥50	2.20	2.19-2.21	2.47 2.53	2.46-2.48 2.52-2.54	1385 1149	2.17	2.16-2.18	2.46 2.52	2.45-2.49 2.49-2.53	623 558	2.17	2.47 2.53		=Ca+0.020x(41.3-Alb) where 41.3 g/L is the albumin median	
Cholesterol	mmol/L	4.90	NTP	5.220	3.0 %	FM	18-29 30-49 ≥50	2.89 3.43 4.02	2.78-3.04 3.28-3.55 3.98-4.14	6.13 6.92 7.87	6.02-6.37 6.77-7.19 7.73-8.09	674 843 1216	2.95 3.35 3.89	2.79-3.14 3.13-3.51 3.79-4.01	5.89 6.75 7.35	5.78-6.52 6.41-7.06 7.22-7.62	316 368 618	2.9 3.3 3.9	6.1 6.9 7.8			
Creatininium	umol/L	70.6	NTP	73.90	4.7 %	F M	>=18 ≥18	51.1 63.6	50.2-52.0 62.8-64.3	84.1 100.0	83.0-87.0 98.7-101.8	1391 1243	50.5 62.4	47.4-52.7 60.7-63.7	87.5 100.7	84.5-90.4 98.6-103.1	647 597	50 60	90 100		See table 3 and plot of enzymatic -, Vitros and Jaffe methods on NORIP home site (1)	
Iron	umol/L	21.16	NTP	20.00	12.5 %	FM	>=18	9.2	8.9-9.6	33.7	33.0-34.4	2309	9.0	8.3-9.4	33.7	32.2-35.0	1076	9	34		Results <6 umol/L removed	
Iron saturation		0.311	Iron, TIBC		10.1 %	F M	18-49 ≥50 ≥18	0.11 0.14 0.16	0.08-0.12 0.11-0.17 0.14-0.17	0.50 0.57	0.48-0.58 0.53-0.61	162 133 368	0.12 0.14	- -	0.61 0.59	- -	56 80	0.10 0.15	0.50 0.57		Oestrogen users and iron <6 umol/L removed	
Glucose	mmol/L	4.464	NTP	4.405	3.8 %	FM F M	>=18 ≥18 ≥18	3.98 3.94 4.17	3.94-4.09 3.86-4.05 4.08-4.24	5.99 5.87 6.21	5.90-6.13 5.68-5.99 5.96-6.50	919 482 436	4.18 4.13 4.47	4.14-4.36 3.97-4.18 4.34-4.55	6.29 6.12 6.54	6.12-6.52 5.91-6.30 6.19-6.99	527 271 256	4.0 4.4	6.0 6.4	4.2 6.3	Fasting (>11 h)	
HDL-cholesterol	mmol/L	1.331	NORIP	1.387	9.0 %	F M	>=18 ≥18	1.03 0.83	0.99-1.06 0.79-0.86	2.61 2.13	2.54-2.66 2.05-2.16	1379 1222	1.04 0.80	0.98-1.08 0.75-0.85	2.68 2.14	2.59-2.79 2.09-2.28	644 586	1.0 0.8	2.7 2.1			
Potassium	mmol/L	3.74	NTP	3.732	2.3 %	FM	>=18	3.61	3.60-3.63	4.64	4.61-4.66	2608	3.47	3.45-3.49	4.38	4.32-4.43	1172	3.6	4.6	3.5	4.4	See table 2
LDL-cholesterol (computed, see comment)	mmol/L	2.9	See total- and HDL-cholesterol, triglycerides		9.1 %	FM	18-29 30-49 ≥50 18-29 30-49 ≥50	1.24 1.39 1.98 1.28 1.52 2.03	1.06-1.33 1.28-1.68 1.86-2.16 1.10-1.38 1.31-1.71 1.91-2.19	4.29 4.71 5.35 4.34 4.78 5.40	3.98-4.38 4.39-5.11 5.13-5.67 4.05-4.50 4.48-5.22 5.20-5.71	275 310 579 275 310 579	1.21 1.47 1.94 1.25 1.49 1.99	0.58-1.36 1.16-1.61 1.73-2.05 0.62-1.40 1.21-1.67 1.79-2.10	4.00 4.25 5.08 4.08 4.32 5.16	3.68-4.30 3.95-4.95 4.89-5.86 3.73-4.45 3.99-5.06 4.95-5.92	144 159 351 144 159 351	1.2 1.4 2.0 1.3 1.5 2.0	4.3 4.7 5.3 4.3 4.8 5.4			LDLchol = cholesterol - HDLchol - triglyceride/2, where triglyceride is < 4 mmol/L LDLchol = cholesterol - HDLchol - triglyceride/2.2, where triglyceride is < 4 mmol/L
Magnesium	mmol/L	0.797	NTP	0.810	2.6 %	FM	>=18	0.71	0.70-0.71	0.94	0.93-0.95	2123	0.71	0.71-0.72	0.93	0.93-0.94	943	0.71	0.94			
Sodium	mmol/L	137.4	NTP	140.65	0.5 %	FM	>=18	136.7	136.3-136.9	144.8	144.5-145.1	2642	136.7	136.4-137.1	143.6	143.4-143.9	1291	137	145		144	
Phosphate	mmol/L	1.03	DGKC	1.04	5.4 %	F M	>=18 18-49 ≥50	0.85 0.75	0.84-0.87 0.73-0.77	1.49 1.63 1.33	1.45-1.50 1.57-1.70 1.31-1.39	1365 670 558	0.76 0.71	0.72-0.78 0.69-0.73	1.41 1.53 1.23	1.37-1.45 1.45-1.59 1.16-1.31	618 298 271	0.85 0.75	1.50 1.65 1.35	0.76 0.71	1.41 1.53 1.23	
Protein	g/L	67.1	DGKC	68.7	2.1 %	FM	>=18	62.4	62.0-62.7	77.9	77.5-78.8	1985	64.3	63.8-64.9	79.5	79.2-80.0	877	62	78	64	79	
TIBC	umol/L	68.0	NORIP (IFCC methods)	68.0	4.8 %	FM	>=18	48.9	48.5-50.1	83.4	81.1-85.7	668	47.4	44.7-49.8	79.8	76.0-84.5	136	49	83	47	80	Oestrogen users removed
Triglyceride	mmol/L	1.31	DGKC	1.287	16.4 %	FM	>=18	0.47	0.44-0.48	2.60	2.35-2.86	1203	0.45	0.42-0.48	2.39	2.21-2.55	704	0.45	2.60			Fasting (≥12 hours)
Carbamide (urea)	mmol/L	4.8	NTP	4.910	7.9 %	F M	>=50 18-49 ≥50	3.11 3.24 3.64	2.97-3.31 3.08-3.31 3.46-3.78	7.97 8.16	7.66-8.35 7.97-8.42	585 649 538	3.05 3.21 3.46	2.68-3.38 2.97-3.50 3.24-3.61	7.40 8.08 8.06	7.23-8.70 7.50-8.87 7.83-9.75	248 252 230	3.1 3.2 3.5	7.9 8.1			
Urate (uric acid)	umol/L	290.2	NTP	309.9	7.2 %	F M	18-49 ≥50 ≥18	154 231	148-159 225-239	350 394 475	340-365 379-414 466-481	780 608 1232	160 227	142-168 213-235	365 421 482	333-407 397-456 455-502	280 257 503	155 230 230	350 400 480			