

Clinical Tests Reference Ranges

Items	Reference ranges		Units	Test Equipment and Analysis Method	Measurement Facility		
	Male	Female					
Biochemistry							
Protein, Total	6.7-8.3		g/dL	Canon Medical Systems Corporation TBA-1500FR	Biuret method Improved BCP method JSCC standardised method JSCC standardised method IFCC standardised method Enzymatic assay Enzymatic assay IFCC standardised method JSCC standardised method L-leusyl-p-nitroanilid method JSCC standardised method JSCC standardised method Enzymatic assay Urease-LEDH method Enzymatic assay Enzymatic assay ISE(Ion Selective Electorode) ISE(Ion Selective Electorode) ISE(Ion Selective Electorode) Arsenazo III method Enzymatic assay Enzymatic assay Enzymatic assay Enzymatic assay (Direct method) Enzymatic assay (Direct method) Enzymatic assay(Free glycerol remove method) Enzymatic assay Latex agglutination nephelometry		
Albumin	3.8-5.2		g/dL				
Albumin/Globulin Ratio	1.1-2.0						
Asparate aminotransferase	10-40		U/L				
Alanine aminotransferase	5-45		U/L				
Lactate dehydrogenase	124-222		U/L				
Bilirubin, Total	0.2-1.2		mg/dL				
Bilirubin, Direct	0.0-0.2		mg/dL				
Alkaline phosphatase	38-113		U/L				
γ-Glutamyltransferase	≤80	≤30	U/L				
Leucine aminopeptidase	45-81	37-61	U/L				
Cholinesterase	234-493	200-452	U/L				
Creatine kinase	60-270	40-150	U/L				
Amylase	40-122		U/L				
Blood urea nitrogen	8.0-20.0		mg/dL				
Creatinine	0.61-1.04	0.47-0.79	mg/dL				
Uric acid	3.8-7.0	2.5-7.0	mg/dL				
Sodium	137-147		mEq/L				
Chloride	98-108		mEq/L				
Potassium	3.5-5.0		mEq/L				
Calcium	8.4-10.4		mg/dL				
Inorganic Phosphate	2.5-4.5		mg/dL				
Magnesium	1.9-2.5		mg/dL				
Cholesterol, Total	120-219		mg/dL				
Cholesterol, LDL	65-139		mg/dL				
Cholesterol, HDL	40-85	40-95	mg/dL				
Triglyceride(s)	30-149		mg/dL				
Glucose	70-109		mg/dL				
C-Reactive protein	≤0.30		mg/dL				
Bilirubin, Indirect	0.2-1.0		mg/dL				
Hematology							
White blood cell count	3300- 9000		/ μ L			Sysmex Corporation Sysmex XR-1000	Flow Cytometry method DC detection method SLS-Hb method DC detection method DC detection method Flow Cytometry method DC detection method Flow Cytometry method Flow Cytometry method
Red blood cell count	430- 570	380- 500	× 10 ⁴ / μ L				
Hemoglobin	13.5-17.5	11.5-15.0	g/dL				
Hematocrit	39.7- 52.4	34.8- 45.0	%				
Mean corpuscular volume	85-102		fL				
Mean corpuscular hemoglobin	28.0- 34.0		pg				
Mean corpuscular hemoglobin concentration	30.2-35.1		%				
Platelet count	14.0-34.0		× 10 ⁴ / μ L				
Reticulocytes	4-19		%				
Differential white blood cell count	Neutrophils	40.0-75.0		%			
	Lymphocytes	18.0-49.0		%			
	Monocytes	2.0-10.0		%			
	Eosinophils	0.0-8.0		%			
Basophils	0.0-2.0		%				
Urinalysis							
Color				Eye sight	Siemens Healthcare Diagnostics Corporation Clinitek Advantus		
Specific gravity	1.006-1.030			Refractometer method			
pH	5.0-7.5						
Glucose	(-)						
Protein	(-)						
Occult blood	(-)						
Ketone bodies	(-)						
Bilirubin	(-)						
Urobilinogen	(++)						
Nitrite	(-)						
Leukocytes	(-)						
Turbidity				Eye sight			
Sedimentary test, Erythrocytes			/HPF	Microscopic			
Sedimentary test, Leukocytes			/HPF				
Sedimentary test, Squamous epithelial cells			/HPF				
Drug testing, Urine	(-)			Gold colloids particle immunoassay			
Pregnancy test				Immuno-chromatography			
Cotinine test	(-)			Immuno-chromatography			
Others							
Breath alcohol test	0.00		mg/L	Semiconductor sensor			
Occult blood, Fecal	(-)			Immuno-chromatography			
Coagulation tests							
Prothrombin time:seconds	9.4-12.5		sec	Sysmex Corporation Sysmex CS-1600	Coagulometric measurements clotting method adding thrombin		
Prothrombin time:Activity	70-100		%				
Prothrombin time:INR	0.85-1.15						
Activated partial thromboplastin time	25.0-36.0		sec				
Fibrinogen	155-415		mg/dL				
Immunology							
Syphilis test, RPR	(-)			Canon Medical Systems Corporation TBA-1500FR	Latex agglutination nephelometry		
Syphilis test, TP antibody	(-)				Latex agglutination nephelometry		
HBs antigen	(-)			Abbott Japan Corporation ARCHITECT	CLIA		
HCV antibody, 2nd generation	(-)				CLIA		
HIV antigen and antibody	(-)				CLIA		