

Clinical Tests Reference Ranges

Items	Reference ranges		Units	Test Equipment and Analysis Method	Measurement Facility		
	Male	Female					
<b>Biochemistry</b>							
Protein, Total	6.7-8.3		g/dL	Canon Medical Systems Corporation TBA-2000FR	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 (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				
<b>Hematology</b>							
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 DC detection method DC detection method Flow Cytometry method Flow Cytometry method
Red blood cell count	430- 570	380- 500	× 10 <sup>4</sup> / 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 <sup>4</sup> / 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		%				
<b>Urinalysis</b>							
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			
<b>Others</b>							
Breath alcohol test	0.00		mg/L	Semiconductor sensor			
Occult blood, Fecal	(-)			Immuno-chromatography			
<b>Coagulation tests</b>							
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				
<b>Immunology</b>							
Syphilis test, RPR	(-)			Latex agglutination nephelometry	HAKATA CLINIC		
Syphilis test, TP antibody	(-)			Latex agglutination nephelometry			
HBs antigen	(-)			CLIA			
HCV antibody, 2nd generation	(-)			CLIA			
HIV antigen and antibody	(-)			CLIA			