

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-2000FR	Biuret method	
Albumin	3.8-5.2		g/dL			Improved BCP method
Albumin/Globulin Ratio	1.1-2.0					
Asparate aminotransferase	10-40		U/L			JSCC standardised method
Alanine aminotransferase	5-45		U/L			JSCC standardised method
Lactate dehydrogenase	124-222		U/L			IFCC standardised method
Bilirubin,Total	0.2-1.2		mg/dL			Enzymatic assay
Bilirubin,Direct	0.0-0.2		mg/dL			Enzymatic assay
Alkaline phosphatase	38-113		U/L			IFCC standardised method
γ-Glutamyltransferase	≤80	≤30	U/L			JSCC standardised method
Leucine aminopeptidase	45-81	37-61	U/L			L-leusyl-p-nitroanilid method
Cholinesterase	234-493	200-452	U/L			JSCC standardised method
Creatine kinase	60-270	40-150	U/L			JSCC standardised method
Amylase	40-122		U/L			Enzymatic assay
Blood urea nitrogen	8.0-20.0		mg/dL			Urease-LEDH method
Creatinine	0.61-1.04	0.47-0.79	mg/dL			Enzymatic assay
Uric acid	3.8-7.0	2.5-7.0	mg/dL			Enzymatic assay
Sodium	137-147		mEq/L			ISE(Ion Selective Electorode)
Chloride	98-108		mEq/L			ISE(Ion Selective Electorode)
Potassium	3.5-5.0		mEq/L			ISE(Ion Selective Electorode)
Calcium	8.4-10.4		mg/dL	Arsenazo III method		
Inorganic Phosphate	2.5-4.5		mg/dL	Enzymatic assay		
Magnesium	1.9-2.5		mg/dL	Enzymatic assay		
Cholesterol,Total	120-219		mg/dL	Enzymatic assay		
Cholesterol,LDL	65-139		mg/dL	Enzymatic assay (Direct method)		
Cholesterol,HDL	40-85	40-95	mg/dL	Enzymatic assay (Direct method)		
Triglyceride(s)	30-149		mg/dL	Enzymatic assay(Free glycerol remove method)		
Glucose	70-109		mg/dL	Enzymatic assay		
C-Reactive protein	≤0.30		mg/dL	Latex agglutination nephelometry		
Bilirubin,Indirect	0.2-1.0		mg/dL			
Hematology						
White blood cell count	3300- 9000		/ μL	Sysmex Corporation Sysmex XR-1000	Flow Cytometry method	
Red blood cell count	430- 570	380- 500	× 10 ⁴ / μL			DC detection method
Hemoglobin	13.5-17.5	11.5-15.0	g/dL			SLS-Hb method
Hematocrit	39.7- 52.4	34.8- 45.0	%			DC detection method
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 / μL			DC detection method
Reticulocytes	4-19		%			Flow Cytometry method
Differential white blood cell count	Neutrophils	40.0-75.0	%			Flow Cytometry method
	Lymphocytes	18.0-49.0	%			
	Monocytes	2.0-10.0	%			
	Eosinophils	0.0-8.0	%			
	Basophils	0.0-2.0	%			
Urinalysis						
Color				Eye sight		
Specific gravity	1.006-1.030			Refractometer method		
pH	5.0-7.5			Siemens Healthcare Diagnostics Corporation Clinitek Advantus	Testing paper	
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 CS-2100i	Coagulometric measurements	
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	(-)			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		