

Test Name	Sample Type	Units	Sex	Age	Values	Level
Copper	Liver Tissue	mcg/g dry weight	All	All	> 1000	Very High
					250-1000	High
					50-250	Moderately High
					<50	Normal
Iron	Liver Tissue	mcg/g dry weight	All	All	> 10,000	Diagnostic of hemochromatosis
					> 3,000	Iron overload without cellular injury and cirrhosis
Ferritin	Serum	mcg/L	Male	10-17 years	15-201	Normal
				≥ 18 years	31-409	
			Female	10-17 years	6-175	
				≥ 18 years	11-328	
Bilirubin	Serum	mg/dL	All	15 days-17 years	0.0-1.0	Normal
				≥ 18 years	0.0-1.2	
Alanine Aminotransferase (ALT)	Serum	U/L	Male	≥ 1 year	7-55	Normal
			Female	≥ 1 year	7-45	
Aspartate Aminotransferase (AST)	Serum	U/L	Male	1-13 years	8-60	Normal
				≥ 14 years	8-48	
			Female	1-13 years	8-50	
				≥ 14 years	8-43	
Alpha-Fetoprotein (AFP)	Serum	ng/mL	All	All who are not pregnant	< 8.4	Normal
Alkaline Phosphatase (ALP)	Serum	U/L	Male	1-10 years	142-335	Normal
				10-13 years	129-417	
				13-15 years	116-468	
				15-17 years	82-331	
				17-19 years	55-149	
				≥ 19 years	40-129	
			Female	1-10 years	142-335	
				10-13 years	129-417	
				13-15 years	57-254	
				15-17 years	50-117	
				≥ 17 years	35-104	
				6-10 years	4.10-5.20	

Red Blood Cell Count	Whole Blood			11-14 years	4.20-5.30	
				15-17 years	4.30-5.70	
				≥ 18 years	4.35-5.65	
			Female	6-10 years	4.10-5.20	
				11-14 years	4.10-5.10	
				15-17 years	3.80-5.0	
				≥ 18 years	3.92-5.13	
Hemoglobin	Whole Blood	g/dL	Male	9-10 years	11.8-14.7	Normal
				11-14 years	12.4-15.7	
				15-17 years	13.3-16.9	
				≥ 18 years	13.2-16.6	
			Female	9-10 years	11.8-14.7	
				11-17 years	11.9-14.8	
				≥ 18 years	11.6-15.0	
Hematocrit	Whole Blood	%	Male	8-11 years	35-43	Normal
				12-15 years	38-47	
				16-17 years	40-50	
				≥ 18 years	38.3-48.6	
			Female	8-17 years	35-43	
				≥ 18 years	35.5-44.9	