ARUP LABORATORIES

HOTLINE: Effective February 22, 2022

0081057 **Testosterone, Bioavailable and Total, Includes Sex Hormone-Binding Globulin (Adult Females, Children, or Individuals on Testosterone-Suppressing Hormone Therapy)** **BIO T MASS**

Specimen Required: Patient Prep: Collect between 6-10 a.m.
Collect: Serum separator tube or green (sodium or lithium heparin).
Specimen Preparation: Separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.8 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: EDTA plasma.
Stability (collection to initiation of testing): After separation from cells: Ambient: 24 hours; Refrigerated: 1 week; Frozen: 6 months

Reference Interval:

Test Number	Components	Reference Interval
0099375	Sex Hormone-Binding Globulin	Effective February 22, 2022

Age	Male	Female
1-30 days	13-85 nmol/L	14-60 nmol/L
31-364 days	70-250 nmol/L	60-215 nmol/L
1-3 years	50-180 nmol/L	60-190 nmol/L
4-6 years	45-175 nmol/L	55-170 nmol/L
7-9 years	28-190 nmol/L	35-170 nmol/L
10-12 years	23-160 nmol/L	17-155 nmol/L
13-15 years	13-140 nmol/L	11-120 nmol/L
16-17 years	10-60 nmol/L	19-145 nmol/L
18-49 years	17-56 nmol/L	25-122 nmol/L
50 years and older	19-76 nmol/L	17-125 nmol/L
Tanner Stage I	26-186 nmol/L	30-173 nmol/L
Tanner Stage II	22-169 nmol/L	16-127 nmol/L
Tanner Stage III	13-104 nmol/L	12-98 nmol/L
Tanner Stage IV	11-60 nmol/L	14-151 nmol/L
Tanner Stage V	11-71 nmol/L	23-165 nmol/L

	Testosterone LC-MS, Bioavailable	

Female - Bioavailable Testosterone, ng/dL	Male - Bioavailable Testosterone, ng/dL
1-6 years: Less than 1.3 ng/dL	1-6 years: Less than 1.3 ng/dL
7-9 years: 0.3-5.0 ng/dL	7-9 years: 0.3-2.8 ng/dL
10-11 years: 0.4-9.6 ng/dL	10-11 years: 0.1-17.9 ng/dL
12-13 years: 1.7-18.8 ng/dL	12-13 years: 1.4-288.0 ng/dL
14-15 years: 3.0-22.6 ng/dL	14-15 years: 9.5-337.0 ng/dL
16-17 years: 3.3-28.6 ng/dL	16-17 years: 35.0-509.0 ng/dL
18-30 years: 2.2-20.6 ng/dL	18 years and older: 130-680 ng/dL
31-40 years: 4.1-25.5 ng/dL	Tanner Stage I: 0.3-13.0 ng/dL
41-51 years: 2.8-16.5 ng/dL	Tanner Stage II: 0.3-59.0 ng/dL
Postmenopausal: 1.5-9.4 ng/dL	Tanner Stage III: 1.9-296.0 ng/dL
Tanner Stage I: 0.3-5.5 ng/dL	Tanner Stage IV: 40.0-485.0 ng/dL
Tanner Stage II: 1.2-15.0 ng/dL	Tanner Stage V: 124.0-596.0 ng/dL
Tanner Stage III: 3.8-28.0 ng/dL	
Tanner Stage IV: 2.8-39.0 ng/dL	
Tanner Stage V: 2.5-23.0 ng/dL	

0081059	Testosterone, Free (Adult Females, Children, or Individuals on Testosterone-Suppressing Hormone Therapy)	

Female Free Testosterone, pg/mL	Male Free Testosterone, pg/mL
1-6 years: Less than 0.6 pg/mL	1-6 years: Less than 0.6 pg/mL
7-9 years: 0.6-1.8 pg/mL	7-9 years: 0.1-0.9 pg/mL
10-11 years: 0.1-3.5 pg/mL	10-11 years: 0.1-6.3 pg/mL
12-13 years: 0.9-6.8 pg/mL	12-13 years: 0.5-98.0 pg/mL
14-15 years: 1.2-7.5 pg/mL	14-15 years: 3-138.0 pg/mL
16-17 years: 1.2-9.9 pg/mL	16-17 years: 38.0-173.0 pg/mL
18-30 years: 0.8-7.4 pg/mL	18 years and older: 47-244 pg/mL
31-40 years: 1.3-9.2 pg/mL	Tanner Stage I: Less than or equal to 3.7 pg/mL
41-51 years: 1.1-5.8 pg/mL	Tanner Stage II: 0.3-21 pg/mL
Postmenopausal: 0.6-3.8 pg/mL	Tanner Stage III: 1.0-98.0 pg mL
Tanner Stage I: Less than 2.2 pg/mL	Tanner Stage IV: 35.0-169.0 pg/mL
Tanner Stage II: 0.4-4.5 pg/mL	Tanner Stage V: 41.0-239.0 pg/mL
Tanner Stage III: 1.3-7.5 pg mL	
Tanner Stage IV: 1.1-15.5 pg/mL	
Tanner Stage V: 0.8-9.2 pg/mL	

0081058	Testosterone (Adult Females, Children, or Individuals on Testosterone-Suppressing Hormone Therapy)	Effective August 19, 2013		
		Age	**Female**	**Male**
		Premature (26-28 weeks)	5-16 ng/dL	59-125 ng/dL
		Premature (31-35 weeks)	5-22 ng/dL	37-198 ng/dL
		Newborn	20-64 ng/dL	75-400 ng/dL
		1-5 months	Less than 20 ng/dL	14-363 ng/dL
		6-24 months	Less than 9 ng/dL	Less than 37 ng/dL
		2-3 years	Less than 20 ng/dL	Less than 15 ng/dL
		4-5 years	Less than 30 ng/dL	Less than 19 ng/dL
		6-7 years	Less than 7 ng/dL	Less than 13 ng/dL
		8-9 years	1-11ng/dL	2-8 ng/dL
		10-11 years	3-32 ng/dL	2-165 ng/dL
		12-13 years	6-50 ng/dL	3-619 ng/dL
		14-15 years	6-52 ng/dL	31-733 ng/dL
		16-17 years	9-58 ng/dL	158-826 ng/dL
		18-39 years	9-55 ng/dL	300-1080 ng/dL
		40-59 years	9-55 ng/dL	300-890 ng/dL
		60 years and older	5-32 ng/dL	300-720 ng/dL
		Premenopausal (18 years and older)	9-55 ng/dL	Does Not Apply
		Postmenopausal	5-32 ng/dL	Does Not Apply
		Tanner Stage I	2-17 ng/dL	2-15 ng/dL
		Tanner Stage II	5-40 ng/dL	3-303 ng/dL
		Tanner Stage III	10-63 ng/dL	10-851 ng/dL
		Tanner Stage IV-V	11-62 ng/dL	162-847 ng/dL

Interpretive Data:
Bioavailable testosterone concentration is calculated using total testosterone (measured by mass spectrometry) and the binding constant of testosterone and sex hormone-binding globulin (SHBG) and/or albumin.

For individuals on testosterone-suppressing hormone therapies (e.g., antiandrogens or estrogens), refer to cisgender female reference intervals. For a complete set of all established reference intervals, refer to ltd.aruplab.com/Tests/Pub/0081057.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 0081058, Testosterone, LC-MS/MS from Testosterone, LC-MS/MS to Testosterone by Mass Spec.
Change the charting name for component 0081096, Testosterone, Free LC-MS/MS from Testosterone, Free LC-MS/MS to Testosterone, Free by Mass Spec.
Change the charting name for component 0081098, Testosterone, LC-MS/MS, Bioavailable from Testosterone, LC-MS/MS, Bioavailable to Testosterone, Bioavailable by Mass Spec.
Remove information found in the Remarks field.