



Laboratory Service Manual

Lab Dept: Urine/Stool

Test Name: 17-KETOSTEROIDS, URINE

General Information

Lab Order Codes: 17KS

Synonyms: 17-KS

CPT Codes: 83586 – Ketosteroids, 17-; total

82570 – Creatinine, other source

Test Includes: Urine 17 - Ketosteroid concentration in mg/24 hours and urine creatinine concentration in mg/dL

Logistics

Test Indications: Assess adrenal androgens. 17-Ketosteroids are elevated in Cushing's syndrome, adrenogenital syndrome, some adrenal and gonadal tumors, pregnancy, and female pseudohermaphroditism.

Lab Testing Sections: Urine/Stool - Sendouts

Referred to: Esoterix, Inc (test #500230)

Phone Numbers:

Minneapolis: 612-813-6280

Saint Paul: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 3 - 7 days, test is set up 1 times per week

Special Instructions: Submit an entire 24-hour urine collection. No preservative. Refrigerate specimen during collection. Deliver to laboratory as soon as possible after the collection is completed.

Note: Starting and ending times of collection are required for a timed urine collection and must be documented electronically or on the proper request form.

Specimen



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Specimen Type:	Urine, timed collection
Container:	Plastic leakproof container (No preservative). Urine GUARD® collection container is preferred for a timed urine sample.
Draw Volume:	Submit an entire 24-hour urine collection
Processed Volume:	50 mL (Minimum: 5.0 mL) aliquot of a well mixed 24-hour urine.
Collection:	For timed urine collections, empty the bladder, discard the voided sample, and note the start time. Collect all urine voided for the specified time period. At the end of the period, note the finishing time, add the last voided sample to the container by emptying the bladder. Bring the refrigerated container to the lab. Make sure all specimens submitted to the laboratory are properly labeled with the patient's name, medical record number and date of birth.
Special Processing:	Lab Staff: Measure 24 hour urine. Add boric acid (0.5 g/100 mL) as preservative 0.5 g/100mL. Mix sample well and remove a 50 mL aliquot. Freeze aliquoted specimen in 60 mL urine container. Ship frozen. Forward promptly.
Patient Preparation:	N/A
Sample Rejection:	Specimens other than a complete 24 hour collection

Interpretive

Reference Range:

Males



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1 - 4 years:	<1.0 - 2.0 mg/24 hours
5 - 9 years:	<1.0 - 3.2 mg/24 hours
10 - 12 years:	1.0-5.0 mg/24 hours
12 - 14 years:	1.0 - 5.5 mg/24 hours
14 - 16 years:	3.0 - 13.0 mg/24 hours
Adults:	10.0 - 25.0 mg/24 hours
Females	
1 - 4 years:	<1.0 - 2.0 mg/24 hours
5 - 9 years:	<1.0 - 3.2 mg/24 hours
10 - 12 years:	1.0 - 5.0 mg/24 hours
12 - 14 years:	1.0 - 5.5 mg/24 hours
14 - 16 years:	2.5 - 8.0 mg/24 hours
Adults:	6.0 - 14.0 mg/24 hours

Critical Values:

N/A

Limitations:

Increased with obesity. Numerous drugs in common use cause spurious increase or decrease including carbamazepine, cephalothin, and tiaprofenic acid. Excretion of the 17-ketosteroids is variable over time. Although often used to evaluate androgenic status, this test essentially does not detect the major androgens, testosterone and dihydrotestosterone. If low androgens are anticipated, serum testosterone is the test of choice, not 17-KS.

Methodology:

Zimmerman Reaction after Acid Hydrolysis and Extraction

Contraindications:

ACTH will elevate values, as will stress.

References:

Esoterix, Inc Web Page www.esoterix.com

Esoterix, Inc. "Expected Value & S.I. Unit Conversion Table" Fifth Edition