

**CORTISOL/CORTISONE, FREE, RANDOM, URINE**  
**#500004**

NOTE: The testing and reporting is equivalent to Rochester test Cortisol/Cortisone, Free, Random, Urine (88903)

**USEFUL FOR:**

- Determination of cortisol concentration in random urine specimens may be used to investigate suspected hypercortisolism, when a 24-hour collection is prohibitive (ie, pediatric).
- The cortisol to cortisone ratio can assist in diagnosing acquired or inherited abnormalities of 11-beta-hydroxy steroid dehydrogenase (11-beta HSD).
- Diagnosis of pseudo-hyperaldosteronism due to excessive licorice consumption

**METHODOLOGY:** Creatinine: Enzymatic Colorimetric Assay  
Cortisol/Cortisone: Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)

**REFERENCE VALUES:**

**CORTISOL**

Males

0-2 years: 3.0-120 ug/g creatinine  
3-8 years: 2.2-89 ug/g creatinine  
9-12 years: 1.4-56 ug/g creatinine  
13-17 years: 1.0-42 ug/g creatinine  
> or = 18 years: 1.0-119 ug/g creatinine

Females

0-2 years: 3.0-120 ug/g creatinine  
3-8 years: 2.2-89 ug/g creatinine  
9-12 years: 1.4-56 ug/g creatinine  
13-17 years: 1.0-42 ug/g creatinine  
> or = 18 years: 0.7-85 ug/g creatinine

**CORTISONE**

0-2 years: 25-477 ug/g creatinine  
3-8 years: 11-211 ug/g creatinine  
9-12 years: 5.8-109 ug/g creatinine  
13-17 years: 5.4-102 ug/g creatinine  
18-29 years: 5.7-153 ug/g creatinine  
30-39 years: 6.6-176 ug/g creatinine  
40-49 years: 7.6-203 ug/g creatinine  
50-59 years: 8.8-234 ug/g creatinine  
60-69 years: 10-270 ug/g creatinine  
> or =70 years: 12-311 ug/g creatinine

**SPECIMEN REQUIREMENTS:** 5 mL from a random urine collection. Send specimen refrigerated in a plastic, 13-mL urine tube.

**CAUTIONS:**

- This test has limited usefulness in the evaluation of adrenal insufficiency.
- Random urine cortisol results are less reliable than results obtained from properly collected and complete 24-hour urine specimens, which are not affected by diurnal variations in cortisol levels.
- Acute stress (including hospitalization and surgery), alcoholism, depression, and many drugs (eg, exogenous cortisone, anticonvulsants) can obliterate normal diurnal variation, affect response to suppression/stimulation tests, and increase baseline levels.
- LC-MS/MS methodology eliminates analytical interferences including carbamazepine (Tegretol) and synthetic corticosteroids.
- Random urine specimens may yield falsely elevated values when patients have a high urinary output.
- Renal disease (decreased clearance) may cause falsely low values.
- Values may be elevated to twice normal in pregnancy.
- Patients with exogenous Cushing's syndrome caused by ingestion of hydrocortisone will not have suppressed cortisol and cortisone values.

**LIST FEE:** \$ 165.50

**CPT CODE: 82948**

**ANALYTIC TIME:** 2 days

**DAY(S) SET UP:** Mon – Friday, Varies

**QUESTIONS:** Contact your Mayo Medical Laboratories' Regional Manager  
Mary Erath, Mayo Medical Laboratories' Technologist Support  
Telephone: 800-533-1710