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**Lab Dept:** Urine/Stool

**Test Name:** CATECHOLAMINE FRACTIONATION, FREE,  
RANDOM URINE

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***General Information***

**Lab Order Codes:** CTRU

**Synonyms:** Catecholamine Random Urine

**CPT Codes:** 82384 – Catecholamines; fractionated  
82570 – Creatinine, other source

**Test Includes:** Includes random urine levels of epinephrine, norepinephrine, and dopamine reported in mcg/g creatinine.

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***Logistics***

**Test Indications:** Useful as an auxiliary test to fractionated plasma and urine metanephrine measurements in the diagnosis of pheochromocytoma and paraganglioma.

Useful also as an auxiliary test to urine vanillylmandelic acid (VMA) and homovanillic acid (HVA) determination in the diagnosis and follow-up of patients with neuroblastoma and related tumors.

**Lab Testing Sections:** Urine/Stool - Sendouts

**Referred to:** Mayo Clinic Laboratories (MML Test: CTRU)

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

**Turnaround Time:** 2 – 4 days, test set up Monday – Saturday

**Special Instructions:** Specimen processing requires an additive after collection. See [Special Processing](#).

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***Specimen***

**Specimen Type:** Urine, random

**Container:** Plastic leakproof urine container.

**Draw Volume:** Submit entire specimen

**Processed Volume:** 9 mL (Minimum: 3 mL) urine

**Collection:** Routine urine collection, no preservative

**Special Processing:** Lab Staff:

1. Mix the specimen well
2. Remove the 9 mL (Min: 3 mL) aliquot of urine into a plastic, 13 mL urine tube.
3. Add 17  $\mu$ L of 50% acetic acid per 1 mL of urine. This preservative is intended to achieve a pH of between 2 and 4. Contact a Core tech or charge if assistance is needed.
4. Send specimen FROZEN.

Specimen stable frozen for 28 days.

**Patient Preparation:** N/A

**Sample Rejection:** Incorrectly stored or shipped specimens; mislabeled or unlabeled specimens.

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***Interpretive***

<b>Reference Range:</b>	<b>Age</b>	<b>Epinephrine</b>
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<6 months	<76 mcg/g creatinine
6-11 months	<61mcg/g creatinine
12 – 23 months	<40 mcg/g creatinine
24 – 59 months	<38 mcg/g creatinine
5 – 9 years	<30 mcg/g creatinine
≥10 years	<16 mcg/g creatinine
<b>Age</b>	<b>Norepinephrine</b>
<3 months	<273 mcg/g creatinine
3 – 11 months	<196 mcg/g creatinine
12 – 23 months	<140 mcg/g creatinine
24 – 59 months	<92 mcg/g creatinine
≥5 years	<54 mcg/g creatinine
<b>Age</b>	<b>Dopamine</b>
<6 months	200 – 2675 mcg/g creatinine
6 – 11 months	463 – 1933 mcg/g creatinine
12 – 23 months	220 – 1654 mcg/g creatinine
24 – 59 months	168 – 1156 mcg/g creatinine
5 – 9 years	72 – 847 mcg/g creatinine
≥10 years	50 – 400 mcg/g creatinine

**Critical Values:**

N/A

**Limitations:**

Many alterations in physiologic and pathologic states can profoundly affect catecholamine concentrations.

Any environmental factors that may increase endogenous catecholamine production should be avoided.

For further detail, the reference laboratory may be consulted for interpretive information.

**Methodology:** Liquid Chromatography Tandem Mass Spectrometry (LC-MS/MS)

**References:** [Mayo Clinic Laboratories](#) (February 2024)

**Updated:** 2/6/2024: Initial entry. Replaced obsolete test code CATCR.