MAYO CLINIC LABORATORIES

Test Definition: CATP

Catecholamine Fractionation, Free, Plasma

Reporting Title: Catecholamine Fract, Free, P
Performing Location: Rochester

Ordering Guidance:

To preserve the quality of the specimen, **this test should be its own collection**. Sharing the specimen could introduce unforeseen analysis interferences.

This test is not the first-tier test for pheochromocytoma, as plasma catecholamine levels may not be continuously elevated. For the recommended first-tier laboratory test for pheochromocytoma, order either:
-PMET / Metanephrines, Fractionated, Free, Plasma
-METAF / Metanephrines, Fractionated, 24 Hour, Urine

Do not perform this test on patients withdrawing from legal or illegal drugs known to cause rebound plasma catecholamine release during withdrawal (see Cautions for details).

Specimen Requirements:

Patient Preparation:
1. Discontinue drugs that release epinephrine, norepinephrine, or dopamine, or hinder their metabolism, for at least one week before obtaining the specimen (see Cautions for details). If this is not possible for medical reasons, contact the laboratory and discuss whether a shorter drug withdrawal period may be possible in a particular case.
2. Unless the purpose of the measurement is drug monitoring, discontinue any epinephrine, norepinephrine, or dopamine injections or infusions for at least 12 hours before specimen collection.
3. The **patient must refrain from eating, using tobacco, and drinking caffeinated beverages** for at least 4 hours before the specimen is collected.

Supplies: Catecholamine Tubes-EDTA (T066) (tubes contain sodium metabisulfite, may come as 10-mL or 6-mL tubes, and **have a 6-month expiration time)**
Collection Container/Tube:
Preferred: 10-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution
Acceptable: 6-mL Catecholamine tubes containing EDTA-sodium metabisulfite solution
Submission Container/Tube: Plastic vial
Specimen Volume: 3 mL
Collection Instructions:
Note: If the collection instructions are not followed, falsely elevated test results are highly likely.
1. **Drawing from an indwelling intravenous (IV) line/catheter/butterfly is required.**
2. Calm the patient by giving complete instructions and reassurance regarding the procedure.
3. Insert an indwelling IV catheter. Flush with 3 mL of sodium chloride (NaCl) using positive pressure.
4. Have the patient rest for 30 minutes in the supine position in a quiet room.
5. At the end of the 30 minutes, withdraw and discard a minimum of 3 mL of blood to remove the saline out of the catheter.
6. If provocative sampling (eg, standing specimen) is required, perform provocative maneuver immediately after obtaining supine specimen. Obtain standing specimen immediately.
7. For each specimen, draw 10 mL of blood into the chilled 10 mL catecholamine tube containing EDTA-sodium metabisulfite solution. A 6 mL pink top EDTA-metabisulfite tube is an acceptable substitute.
8. Specimens must remain at refrigerated temperature during processing and transport.
9. Separate plasma in a refrigerated centrifuge within 30 minutes of collection.

10. Freeze specimen immediately.

Forms:

If not ordering electronically, complete, print, and send an Oncology Test Request (T729) with the specimen.

Specimen Type	Temperature	Time	Special Container
Plasma EDTA Meta	Frozen	28 days	

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
2846	Norepinephrine	Numeric	pg/mL	2666-6
2901	Epinephrine	Numeric	pg/mL	2230-1
2906	Dopamine	Numeric	pg/mL	2216-0

LOINC® and CPT codes are provided by the performing laboratory.

Supplemental Report:

No

CPT Code Information:

82384

Reference Values:

NOREPINEPHRINE
Supine: 70-750 pg/mL
Standing: 200-1700 pg/mL

EPINEPHRINE
Supine: <111 pg/mL
Standing: <141 pg/mL

DOPAMINE
<30 pg/mL (no postural change)

For International System of Units (SI) conversion for Reference Values, see www.mayocliniclabs.com/order-tests/si-unit-conversion.html.