Test Definition: VMA

Vanillylmandelic Acid, 24 Hour, Urine

Reporting Title: Vanillylmandelic Acid, 24 Hr, U
Performing Location: Mayo Clinic Laboratories - Rochester Main Campus

Ordering Guidance:

In the past, this test has been used to screen for pheochromocytoma. However, vanillylmandelic acid (VMA) is not the analyte of choice to rule out a diagnosis of pheochromocytoma. Recommended tests for that purpose include:
-PMET / Metanephrines, Fractionated, Free, Plasma
-METAF / Metanephrines, Fractionated, 24 Hour, Urine
-CATU / Catecholamine Fractionation, Free, 24 Hour, Urine

Necessary Information:

1. Patient's age is required.
2. Collection duration (in hours) and urine volume (in milliliters) are required.
3. All patients receiving L-dopa should be identified to the laboratory when this test is ordered.
4. Bactrim may interfere with detection of the analyte. All patients taking Bactrim should be identified to the laboratory when this test is ordered.

Specimen Requirements:

Patient Preparation: Administration of L-dopa may falsely increase vanillylmandelic acid results. For 24 hours prior to specimen collection, the patient should **not** take L-dopa.
Supplies: Urine Tubes, 10 mL (T068)
Collection Container/Tube: Clean, plastic urine collection container
Submission Container/Tube: Plastic, 10-mL urine tube
Specimen Volume: 5 mL
Collection Instructions:
1. Add 25 mL of 50% acetic acid as preservative at the start of collection. Use 15 mL of 50% acetic acid for children younger than 5 years. If specimen is refrigerated during collection, preservative may be added up to 12 hours after collection. This preservative is intended to achieve a pH of between approximately 1 and 5.
2. Collect a 24-hour urine specimen.
3. If necessary, adjust urine pH to a level between 1 and 5 by adding 50% acetic acid or hydrochloric acid dropwise and checking the pH.
Additional Information: For multiple collections see Urine Preservatives-Collection and Transportation for 24-Hour Urine Specimens.

Forms:

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

Urine Preservative Collection Options:

Note: For addition of preservative or application of temperature information, see Specimen Required.

Ambient (no additive)	No
Refrigerate (no additive)	No
Frozen (no additive)	No
50% Acetic Acid	Preferred
Boric Acid*	OK
Diazolidinyl Urea	No
6M Hydrochloric Acid	OK

6M Nitric Acid	OK
Sodium Carbonate	No
Toluene	No
*If boric acid is used, note on specimen container. Also, verify that pH is in desired range (pH=1-5). If pH is outside of desired range, adjust pH with a stronger acid (acetic acid is preferred but other acids listed above could be used if available) in a dropwise fashion to bring pH into desired range.	

Specimen Type	Temperature	Time	Special Container
Urine	Refrigerated (preferred)	28 days	
	Frozen	180 days	

Ask at Order Entry (AOE) Questions:

Test ID	Question ID	Description	Type	Reportable
VMA	TM41	Collection Duration	Plain Text	Yes
VMA	VL39	Urine Volume	Plain Text	Yes

Result Codes:

Result ID	Reporting Name	Type	Unit	LOINC®
3580	Vanillylmandelic Acid, Adult (>14y)	Alphanumeric	mg/24 h	3122-9
3581	Vanillylmandelic Acid, Child (<15y)	Alphanumeric	mg/g Cr	30571-4
TM41	Collection Duration	Alphanumeric		13362-9
VL39	Urine Volume	Alphanumeric		3167-4

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

Supplemental Report:

No

CPT Code Information:

84585

Reference Values:

<1 year: <25.0 mg/g creatinine
1 year: <22.5 mg/g creatinine
2-4 years: <16.0 mg/g creatinine
5-9 years: <12.0 mg/g creatinine
10-14 years: <8.0 mg/g creatinine
> or =15 years (adults): <8.0 mg/24 hours