TEST CHANGE

Vanillylmandelic Acid (VMA) and Homovanillic Acid (HVA), Urine

0080470, VH

Specimen Requirements:	
Patient Preparation:	Abstain from medications for 72 hours prior to collection.
Collect:	24-hour ~~or random~~ urine. Refrigerate 24-hour specimen during collection.
Specimen Preparation:	Transfer 4 mL aliquot from a well mixed 24-hour ~~or random~~ collection to an ARUP Standard Transport Tube. (Min: 1 mL) Record total volume and collection time interval on transport tube and test request form.
Transport Temperature:	Refrigerated.
Unacceptable Conditions:	Specimen types other than urine.
Remarks:	
Stability:	Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 2 weeks
Methodology:	Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry
Performed:	Sun, Tue, Wed, Thu, Fri, Sat
Reported:	1-5 days
Note:	Moderately elevated HVA (homovanillic acid) and VMA (vanillylmandelic acid) can be caused by a variety of factors such as essential hypertension, intense anxiety, intense physical exercise, and numerous drug interactions (including some over-the-counter medications and herbal products). Medications that may interfere with catecholamines and their metabolites include amphetamines and amphetamine-like compounds, appetite suppressants, bromocriptine, buspirone, caffeine, chlorpromazine, clonidine, disulfiram, diuretics (in doses sufficient to deplete sodium), epinephrine, glucagon, guanethidine, histamine, hydrazine derivatives, imipramine, levodopa (L-dopa, Sinemet), lithium, MAO inhibitors, melatonin, methyldopa (Aldomet), morphine, nitroglycerin, nose drops, propafenone (Rythmol), radiographic agents, rauwolfia alkaloids (Reserpine), tricyclic antidepressants, and vasodilators. The effects of some drugs on catecholamine metabolite results may not be predicable.

CPT Codes:	83150; 84585
New York DOH Approval Status:	This test is New York DOH approved.

Interpretive Data:

Vanillylmandelic acid (VMA) and homovanillic acid (HVA) results are expressed as a ratio to creatinine excretion (mg/g CRT). No reference interval is available for results reported in units of mg/L. Slight or moderate increases in catecholamine metabolites may be due to extreme anxiety, essential hypertension, intense physical exercise, or drug interactions. Significant increase of one or more catecholamine metabolites (several times the upper reference limit) is associated with an increased probability of a secreting neuroendocrine tumor.

Per 24h calculations are provided to aid interpretation for collections with a duration of 24 hours and an average daily urine volume. For specimens with notable deviations in collection time or volume, ratios of analytes to a corresponding urine creatinine concentration may assist in result interpretation.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Reference Interval:

Test Number	Components	Reference Interval
	Creatinine, Urine - per 24h	
		Age: Male (mg/d): Female (mg/d) 3-8 years: 140-700: 140-700 9-12 years: 300-1300: 300-1300 13-17 years: 500-2300: 400-1600 18-50 years: 1000-2500: 700-1600 51-80 years: 800-2100: 500-1400 81 years and older: 600-2000: 400-1300
	Homovanillic Acid - per 24h	18 years and older: 0.0-15.0 mg/d
	Vanillylmandelic Acid - per 24h	18 years and older: 0.0-7.0 mg/d
	Vanillylmandelic Acid - ratio to CRT	
		Age: mg/g CRT 0-2 years: 0-27 3-5 years: 0-13 6-17 years: 0-9 18 years and older: 0-6
	Homovanillic Acid - ratio to CRT	
		Age: mg/g CRT 0-2 years: 0-42 3-5 years: 0-22 6-17 years: 0-15 18 years and older: 0-8