



HVA-VMA-5HIAA in Urine LC-MS/MS Analysis Kit

Laboratory measurement of vanillylmandelic acid (VMA), the product of epinephrine, norepinephrine metabolism, and homovanillic acid (HVA), a terminal metabolite of dopamine, and 5-Hydroxyindolacetic acid (5-HIAA) the end metabolite of serotonin is used to enhance clinical diagnosis and management of catecholamine-secreting neurochromaffin tumors such as neuroblastomas. Neuroblastoma usually emerges in children and accounts for 7–10% of childhood cancer; approximately 90% of these tumors produce catecholamines (CAs). Pheochromocytoma is a rare neuroendocrine tumor arising from the chromaffin cells of the adrenal medulla and characterized by producing excessive amounts of CAs and their metabolites.

Highlights of the Analysis Kit



Simultaneously quantification of HVA, VMA and 5-HIAA



Dilute and shoot sample preparation procedure



Total run time 10 min.

Parameters		
Homovanillic Acid	Vanillylmandelic Acid	5-Hydroxyindolacetic Acid
Sample Type		
Urine		

Sample Preparation

1	Pipette 50 μ L of calibrator/control/urine sample into a sample vial
2	Add 50 μ L of IS solution, vortex for 5 sec.
3	Add 400 μ L of Reagent-1 addition to vortex for 5 sec. prior to injection



Total ion chromatogram of HVA, VMA, 5HIAA

Method Performance

All validation results were obtained using Agilent 6460 TQ system

Analytes	LOQ ($\mu\text{g/mL}$)	Linearity ($\mu\text{g/mL}$)	Recovery (%)	Repeatability (%CV)
HVA	1.77	6.09 – 17.00	104	3.54
VMA	1.97	6.32 – 16.40	100	1.03
5-HIAA	1.21	5.44 – 31.20	102	1.62



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