

Vanillylmandelic acid (VMA) and homovanillic acid (HVA) are end-products of the catecholamine metabolism. The determination of VMA and HVA in urine serves as a screening test for neuroblastoma, one of the most common solid tumors in early childhood. 5-hydroxyindoleacetic acid (5-HIAA) is a metabolite of serotonin and is used for the diagnosis of carcinoid tumors (see pages 30 - 33). This ClinRep® Complete Kit from RECIPE allows a reliable determination of VMA, HVA and 5-HIAA in only 15 min time for analysis.

Also available: Complete kits for automated sample preparation (see pages 36 - 37).



Biogenic Amines

VMA, HVA and 5-HIAA in Urine

Test Data

Linearity: VMA: 0.6 - 100 mg/l
HVA: 0.3 - 100 mg/l
5-HIAA: 0.2 - 50 mg/l

Recovery: 75 - 90 %

LOD: VMA: 0.2 mg/l
HVA: 0.1 mg/l
5-HIAA: 0.1 mg/l

LLOQ: VMA: 0.6 mg/l
HVA: 0.3 mg/l
5-HIAA: 0.2 mg/l

Precision

Intraassay: 2.6 % (VMA), 2.5 % (HVA),
3.0 % (5-HIAA)

Interassay: 3.7 % (VMA), 3.8 % (HVA),
3.6 % (5-HIAA)

HPLC Parameters

Isocratic Pump: flow rate: 0.9 ml/min

Injection vol. / int.: 20 µl / 15 min

EC-Detector: pot.: 800 mV, sen.: 50 nA

HPLC-Thermostat: 30 °C

Sample Preparation

Addition of IS:

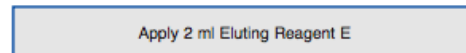


Extraction:

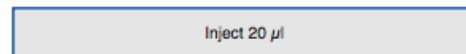


1. wash with 1 ml Ammonia Solution A ↓ 2. fill up with Boric Acid B

Elution:



HPLC Analysis:

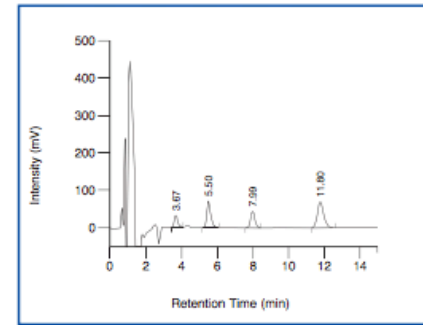


→ Highly selective sample preparation

→ Injection interval: 15 min

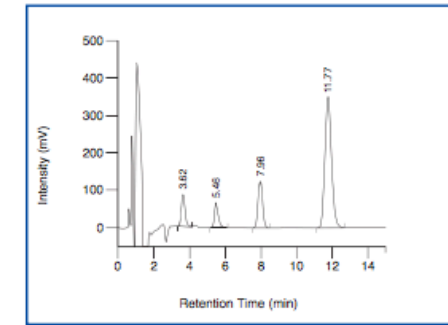
→ Reliable test procedure

ClinChek® Urine Control, Level I



VMA: 3.67 min, IS: 5.50 min, HVA: 7.99 min,
5-HIAA: 11.80 min

ClinChek® Urine Control, Level II



VMA: 3.62 min, IS: 5.46 min, HVA: 7.96 min,
5-HIAA: 11.77 min

Ordering Information

Order No.	Description	Quantity
3000	ClinRep® Complete Kit for VMA, HVA, 5-HIAA in Urine for 100 assays	1 pce.
Kit components (order no. 3000):		
3010	Mobile Phase	1000 ml
3011	Standard Solution, lyophil.	5 x 1 ml
3012	Internal Standard IS, lyophil.	100 ml
3013	Urine Calibrator, lyophil.	5 x 5 ml
3020	Sample Preparation Columns	2 x 3020 (2 x 50 pcs.)
3021	Ammonia Solution A	100 ml
3022	Boric Acid Solution B	2 x 3022 (2 x 300 ml)
3023	Eluting Reagent E	2 x 3023 (2 x 100 ml)
	Manual	1 pce.
	Quick Reference	1 pce.
Start Accessories:		
3030	Analytical Column with test chromatogram	1 pce.
ClinChek® Controls:		
8820	Urine Control, lyophil., Level I	10 x 8 ml
8821	Urine Control, lyophil., Level II	10 x 8 ml
8822	Urine Control, lyophil., Level I, II	2 x 5 x 8 ml