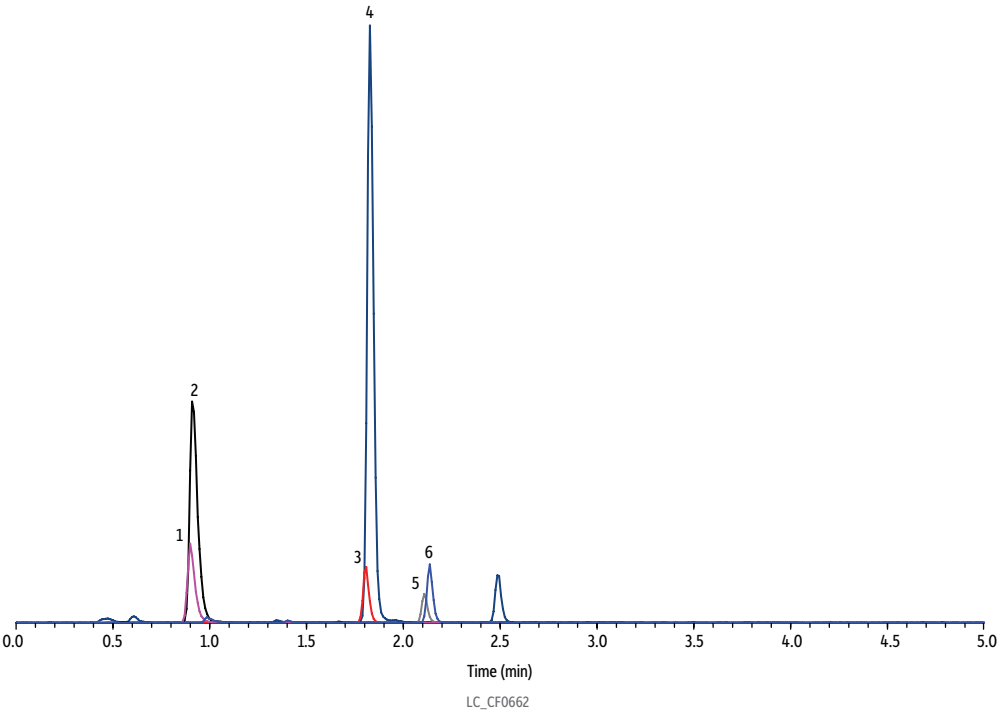
Vanillylmandelic Acid, Homovanillic Acid, and 5-Hydroxyindoleacetic Acid in Human Urine (Quantitative Control Level 2) on Raptor Biphenyl



Peaks	tR (min)	Conc. (µg/mL)	Precursor Ion	Product Ion
1. 4-Hydroxy-3-methoxymandelic acid-D3 (VMA-D3)	0.90	0.83	200.1	139.9
2. Vanillylmandelic acid (VMA)	0.91	10.9–18.2*	197.0	137.9
3. 5-Hydroxyindole-4,6,7-D3-3-acetic-D2 acid (5-HIAA-D5)	1.81	0.83	195.1	148.0
4. 5-Hydroxyindole-3-acetic acid (5-HIAA)	1.83	21.6–32.7*	190.0	145.9
5. 4-Hydroxy-3-methoxyphenyl-D3-acetic-D2 acid (HVA-D5)	2.11	0.83	186.1	127.0
6. Homovanillic acid (HVA)	2.14	12.9–18.9*	181.0	121.9

*These concentration ranges were supplied by the vendor (see notes).

Column Raptor Biphenyl (cat.# 9309512)
Dimensions: 100 mm x 2.1 mm ID
Particle Size: 5 µm
Pore Size: 90 Å
Guard Column: Raptor Biphenyl guard column cartridge 5 mm, 2.1 mm ID, 5 µm (cat.# 930950252)
Temp.: 30 °C
Standard/Sample
Diluent: Water
Inj. Vol.: 5 µL
Mobile Phase
A: 0.1% Formic acid, 5 mM ammonium formate in water
B: Methanol

Time (min)	Flow (mL/min)	%A	%B
0.00	0.5	85	15
3.00	0.5	20	80
3.01	0.5	85	15
5.00	0.5	85	15

Detector MS/MS
Ion Mode: ESI-
Mode: MRM
Instrument UHPLC
Sample Preparation The human urine sample is the Bio-Rad Lyphochek quantitative urine control, level 2. A 40 µL aliquot of urine was mixed with 360 µL of water and 10 µL of internal standard solution (33.3 µg/mL in methanol) in a Thomson 0.45 µm PVDF filter vial and injected for analysis after filtration.