



## Catecholamines, Free Metanephrines and Serotonin in Urine LC-MS/MS Analysis Kit

The major metabolites of catecholamines secreted by the adrenal glands in case of stress are metanephrine, epinephrine, normetanephrine and norepinephrine. These biomarkers are evaluated to determine urinary concentration of them in people with suspected pheochromocytoma. This disease is a very rare tumour and causes hypertension in non-followed cases. It is very important to accurately diagnose before surgical intervention and by looking at the catecholamine derivatives, it is possible to diagnose pheochromocytoma. Jasem presents this analysis reliably on LC-MS/MS with free metanephrine, catecholamine and serotonin kit in urine.

### Highlights of the Analysis Kit

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Rapid and easy sample preparation without derivatization or SPE



All analytes are safeguarded by stable isotope-labeled internal standards



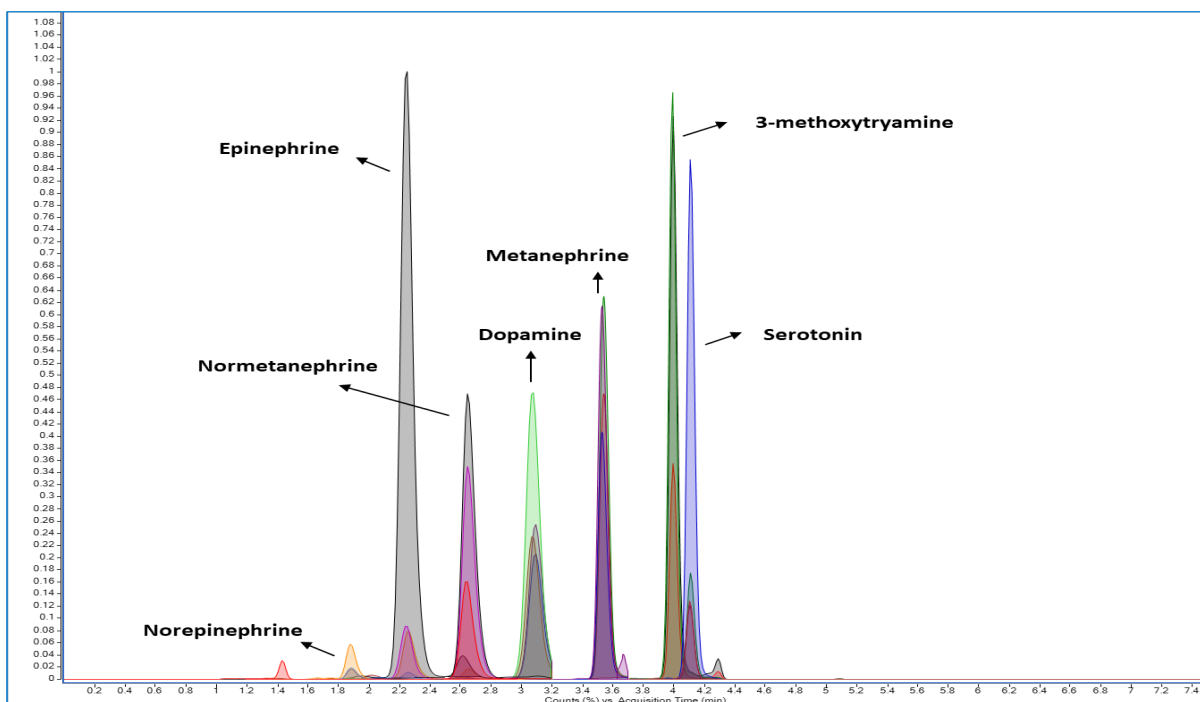
Total analysis time of 7.0 min.

Parameters			
Epinephrine Norepinephrine	Dopamine Metanephrine	Normetanephrine, 3-Metoxytyramine	Serotonin
Sample Type			
Urine			

### Sample Preparation

1	Pipette 50 µl urine sample into a microcentrifuge tube
2	Add 25 µl of internal standard and 175 µl Reagent-1 then vortex for 15 sec.
3	Centrifuge at 4000 rpm for 5 min.
4	Transfer the clear supernatant into an HPLC vial

### Example Chromatogram



Total ion chromatogram of biogenic amines

## Method Performance

All validation results were obtained using Agilent 6460 QQQ system

Analytes	LOQ ( $\mu\text{g/mL}$ )	Linearity ( $\mu\text{g/mL}$ )	Recovery (%)	Repeatability (%CV)
Norepinephrine	20.96	24.0 – 480.0	105	2.28
Epinephrin	11.04	2.0 – 40.0	86	1.16
Normetanephrine	12.15	6.0 – 120.0	102	1.59
Dopamine	36.68	30.0 – 600.0	93	3.82
Metanephrine	11.9	5.0 – 100.0	116	1.48
3-Methoxytyramine	43.38	5.0 – 100.0	99	0.25
Serotonin	29.21	25.0 – 500.0	99	2.72



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