Clinical Use
- Diagnose pheochromocytoma

Reference Range
- Metanephrine ≤ 57 pg/mL
- Normetanephrine ≤ 148 pg/mL
- Metanephrines, Total ≤ 205 pg/mL

Interpretive Information
- Pheochromocytoma
- Neuroblastoma
- Stress

Clinical Background
Normetanephrine and metanephrine are the extra-neuronal catechol-o-methyl transferase (COMT) metabolites of the catecholamines norepinephrine and epinephrine, respectively. Measurement of plasma metanephines is more sensitive for the detection of pheochromocytoma, but may be less specific, than measurement of catecholamines. Proper interpretation of results requires awareness of recent medication/drug history (eg, antihypertensive agents, alcohol, cocaine) and other pre-analytical factors (eg, stress, severe congestive heart failure, myocardial infarction) that influence release of catecholamines and metanephrines.

Method
- Liquid chromatography, tandem mass spectrometry (LC/MS/MS)
- Analytical sensitivity: 25 pg/mL
- Analytical specificity: cross-reacts 0.08% with acetaminophen and 0.03% with 3-hydroxy tyramine (dopamine)

Specimen Requirements
2.5 mL refrigerated EDTA plasma
1.5 mL minimum

Patient preparation: abstain from alcohol, coffee, tea, tobacco, strenuous exercise, and, if possible, medication for 3 days prior to collection. Overnight fasting is preferred. Patient should be seated in a relaxed condition before collection of sample.