

Total Urine Metadrenalines	
Description	Urinary total fractionated metadrenalines (normetadrenaline, metadrenaline, 3-methoxytyraime).
Indication	Investigation of a catecholamine secreting tumour: phaeochromocytoma, incidentaloma, hypertension, neuroendocrine tumours and neuroblastoma.
Additional Info	<p>Phaeochromocytoma and paraganglioma are rare neuroendocrine tumours arising from chromaffin cells. Phaeochromocytomas are typically found in the adrenal medulla, accounting for 80%–85% of cases. Paragangliomas are closely related extra-adrenal tumours that can arise in sympathetic (potentially catecholamine-producing) or parasympathetic (non–catecholamine-producing) ganglia.</p> <p>Estimates of the prevalence of phaeochromocytoma in hypertensive populations vary between 0.1-0.6%. Advances in imaging and screening for familial disease have led to an increased frequency of diagnosis in normotensive and asymptomatic patients. It is estimated that 1.5%–23% of all incidentally detected adrenal masses (incidentalomas) are Phaeochromocytomas.</p> <p>The 1st International Symposia on Phaeochromocytoma recommended that total fractionated urine metadrenalines and or plasma free metadrenalines should be measured for the initial biochemical investigation of phaeochromocytoma or paraganglioma.</p> <p>If clinical suspicion of phaeochromocytoma remains high despite normal 24hr urine metadrenalines, and especially if symptoms are episodic, plasma metanephrines should be measured due to their high diagnostic sensitivity.</p>
Concurrent Tests	Urinary free noradrenaline/adrenaline/dopamine and methylated metabolites normetadrenaline/metadrenaline and plasma metadrenalines
Dietary Requirements	N/A
Interpretation	<p>A number of factors can influence the excretion of metadrenalines in the urine. Borderline increases (false-positive results) in urine metadrenalines are frequently observed due to certain drugs such as tricyclic antidepressants, buspirone hydrochloride, clozapine, sympathomimetic drugs, and β-blockers (see table 1).</p> <p>If borderline results are observed it is recommend that patients undergo a 24-hour urine metadrenaline test at least 2 weeks</p>

	<p>after cessation of any confounding medications and after optimal treatment of any confounding conditions.</p> <p>If metanephrines levels remain borderline elevated on repeat testing it is recommend plasma metadrenalines testing is performed.</p> <p>Below is a summary on the interpretation of total fractionated urine metadrenalines:</p> <ol style="list-style-type: none"> 1. Within the reference range - No phaeochromocytoma. 2. Borderline - Up to twice the reference range 3. Between 2-4 times the reference range – possible phaeochromocytoma 4. Greater than 4 times the reference range – consistent with phaeochromocytoma, consult Endocrinologist
Collection Conditions	Urine must be collected into 5N H ₂ SO ₄ as collection at pH >4.0 can cause auto-oxidation.
Frequency of testing	<p>One 24h collection initially.</p> <p>To allow for detection of intermittent secretion, three separate daily collections are suggested.</p>