

## Urinary Citrate (24hr)

<b>Synonyms</b>	
<b>Clinical Indication</b>	<p>Citrate is an important inhibitory substance in the urinary tract which forms a poorly dissociable but soluble complex with calcium thus reducing the amount of calcium available for binding with oxalate or phosphate. It therefore inhibits the crystallization and enlargement of kidney stones and as a result it decreases the formation of calcium containing stones.</p> <p>Urine citrate may be measured in renal stone patients at diagnosis and is used to monitor treatment with potassium citrate.</p> <p>Urine citrate is part of the metabolic screen in patients with renal calculi.</p>
<b>Part of Profile / See Also</b>	Renal stone screen
<b>Request Form</b>	Combined Pathology manual Blood form or ICE request
<b>Availability / Frequency of Analysis</b>	Referred Test: Analysed by Clinical Biochemistry, UCLH, if specific criteria met. <a href="#">8169</a>
<b>Turnaround Time</b>	2 weeks
<b>Patient Preparation</b>	None
<b>Sample Requirements</b>	
<b>Specimen Type</b>	24 hour urine collection into acid preservative
<b>Volume</b>	24hr collection
<b>Container</b>	Acidified 24 hour urine container.
<b>Reference Range &amp; Units</b>	<p>Urine citrate 24hr excretion (mmol/24hr):</p> <p>Male 0.6 - 4.8</p> <p>Female 1.3 - 6.0</p> <p>Urine citrate:creatinine ratio (mmol/mmol creat):</p> <p>Male 0.04 - 0.33</p> <p>Female 0.11 - 0.55</p> <p>Reference: Referral laboratory (UCLH)</p>
<b>Interferences</b>	
<b>Interpretation &amp; Clinical Decision Value (if applicable)</b>	Hypocitraturia is often observed in patients with idiopathic kidney stones. Citrate therapy significantly reduces the incidence of stone recurrence. A low citrate is associated with renal tubular acidosis, low potassium, chronic diarrhoea, UTI.
<b>References</b>	Up to Date – Prevention of recurrent calcium stones in adults – searched Sept 2018
<b>Test code</b>	24CI

## Lab Handling

Record the 24hr volume, aliquot into two universal containers and store one in the referrals rack at 4°C and the other in the urine archiving racks at 4C. Sent daily by courier to UCLH.

