

Urine amylase

Description	<p>Amylase catalyses the break down of carbohydrates in the diet, such as starch. Two isoenzymes exist – p-amylase and s-amylase, produced primarily by the pancreas and salivary glands respectively. During inflammation of these glands, such as in mumps (salivary glands) or acute pancreatitis, increased amounts of amylase are released into the circulation and can be measured in serum. In addition, because of its small size, amylase is freely filtered by the glomerulus of the kidney and can therefore be measured in urine. Amylase is the only enzyme physiologically found in urine, though in health this is only in very small amounts.</p>
Indication	<p>Urine amylase may be measured to further investigate a serum amylase result that does not agree with a patient's clinical picture. For example, macroamylase is a high molecular weight form of amylase, and therefore is not freely filtered by the glomerulus. A raised macroamylase is not associated with acute pancreatitis; therefore, urine amylase is useful to identify macroamylase. In addition, a raised amylase can be detected for longer in urine than in serum. Therefore if serum amylase is normal, but acute pancreatitis is strongly suspected, urine amylase may be measured to identify a delayed presentation.</p>
Additional Info	<p>Amylase levels may be raised due to other causes as well as acute pancreatitis, such as perforated peptic ulcer, intestinal obstruction and diabetic ketoacidosis. In addition, amylase is not always raised in acute pancreatitis. Therefore results should be interpreted with the patient's clinical picture and any other results.</p>
Concurrent Tests	<p>Serum amylase is usually analysed as the primary investigation for acute pancreatitis.</p>
Dietary Requirements	<p>N/A.</p>
Interpretation	<p>In the presence of macroamylase, a raised serum, but normal urine amylase will be seen. This pattern may also occur in renal failure, due to decreased excretion, therefore all results and clinical picture should be used for interpretation. Alternatively, raised urine amylase levels in the presence or absence of raised serum amylase increases the likelihood of a diagnosis of acute pancreatitis.</p>
Collection Conditions	<p>Either a random urine sample or a 24 hour urine sample. The urine collection container should NOT have additives.</p>
Frequency of testing	<p>As required</p>

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