

# Faecal Alpha-1 Antitrypsin

<b>Synonyms</b>	
<b>Clinical Indication</b>	<p>Inflammatory bowel conditions can lead to a protein-losing enteropathy in which there is increased loss of plasma proteins into the gut. Alpha-1 antitrypsin, a protease inhibitor, is relatively resistant to breakdown by proteolytic enzymes found in the gut and may pass relatively unchanged into the faeces.</p> <p>Levels of alpha-1 antitrypsin in faeces may be used as a guide to the extent of protein loss into the gut, although some studies have shown a high frequency of false negative results. Nevertheless, a positive/elevated finding may be useful in confirming a diagnosis of protein-losing enteropathy and monitoring progress of the disease. A negative result does not exclude protein-losing enteropathy.</p> <p>It is recommended that a serum alpha-1 antitrypsin is measured to ensure normal serum levels.</p>
<b>Part of Profile / See Also</b>	
<b>Request Form</b>	Combined Pathology manual Blood form or ICE request
<b>Availability / Frequency of Analysis</b>	Referred test: Analysed by Protein Reference Unit, St Georges Hospital ( <a href="#">9745</a> ), if specific criteria met.
<b>Turnaround Time</b>	2 weeks
<b>Patient Preparation</b>	
<b>Sample Requirements</b>	<p><b>Specimen Type</b> Faeces</p> <p><b>Volume</b> 10 gram minimum (approx. size of gooseberry).</p> <p><b>Container</b> Plastic universal (blue-topped) Or Plastic universal (white-topped)</p> <p><b>Samples must be transported to laboratory immediately after collection. Samples received in the laboratory &gt;1 hour after collection will not be processed.</b></p>
<b>Reference Range &amp; Units</b>	<p>Less than 5 mg/g dry weight faeces.</p> <p>This range assumes normal serum alpha-1 antitrypsin levels and will apply to the PI M phenotype only.</p>
<b>Interferences</b>	Intestinal bleeding can significantly increase alpha-1 antitrypsin clearance rates.
<b>Interpretation &amp; Clinical Decision Value (if applicable)</b>	False negative results may occur from protein degradation due to incorrect collection or alpha-1 antitrypsin deficiency. False positive results may occur in G.I. bleeding. The normal rate of alpha-1 antitrypsin excretion in the stool is less than 2.6mg/g stool which reflects an intestinal clearance of less than

13mL/day. Diarrhoea, even in the absence of protein-losing gastroenteropathy, can increase clearance of alpha-1 antitrypsin from serum. Alpha-1 antitrypsin clearance values indicative of protein-losing enteropathy are greater than 27 mL/24 hours in patients without diarrhoea and greater than 56 mL/day in patients with diarrhoea.

**References**

Up to Date – Protein-losing gastroenteropathy (Sept 2018)

**Test code**

FAAT

**Lab Handling**

Freeze immediately at -20°C in the frozen referral rack. Samples received >1 hour after collection are not suitable for analysis and a BPRO should be added. Sent frozen with Global courier to St Georges Hospital, London.



9745

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ISO 15189:2012