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A PDF copy of this leaflet can be downloaded from our website:

www.cityassays.org.uk

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Where EVERYONE Matters
Sending Specimens for Analysis

Sample requirement: A random stool sample provided in a suitable container.

- Faecal Elastase-1 is stable in faeces at room temperature for up to 1 week and for 1 month stored at 4°C.
- Please send samples in a sealed bag at ambient temperature, to arrive at the address on the back of this leaflet within 3 days.

Faecal Elastase-1 Assay
Faecal Elastase-1 concentration in stools is determined using an enzyme-linked immunosorbant assay (ScheBo® Pancreatic Elastase-1 Stool Test)¹. The human Faecal Elastase-1 antibody used is immunologically specific and is not affected by enzyme replacement therapies.

Analysis of wet stool samples
High water content of stools can have a dilution effect on the concentration of Faecal Elastase-1 measured and give misleading low results. Our own audits have shown this affects 18% of all samples we receive. To overcome this problem we have developed a new pre-analytical technique for wet stools, which involves drying the stool sample prior to analysis². Results obtained by the dried faecal method are now reported qualitatively to avoid the confusion of reporting against two very different reference ranges. Where a quantitative result is required, we suggest repeating faecal elastase-1 analysis when a more formed stool sample is available.

Reference Ranges

<table>
<thead>
<tr>
<th>Faecal Elastase (µg/g stool)</th>
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<tbody>
<tr>
<td>Normal</td>
<td>&gt;200</td>
</tr>
<tr>
<td>Mild exocrine pancreatic insufficiency</td>
<td>100 - 200</td>
</tr>
<tr>
<td>Severe exocrine pancreatic insufficiency</td>
<td>&lt;100</td>
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Clinical Use of Faecal Elastase
Faecal Elastase-1 is a proteolytic enzyme specifically secreted by the acinar cells of the pancreas. Unlike other pancreatic enzymes such as Chymotrypsin, Elastase-1 is not degraded during intestinal transit, and so the stool concentration reflects exocrine pancreatic function⁶.

Faecal Elastase-1 is increasingly being used as a non-invasive first line test to assess patients with chronic pancreatitis, cystic fibrosis, and other situations involving exocrine pancreas dysfunction³⁵.

Faecal Elastase-1 measurement has been shown to be comparable to pancreatic function tests such as the pancreolauryl test and has higher sensitivity and specificity for pancreatic insufficiency than other pancreatic enzymes such as Faecal Chymotrypsin⁴⁶.

Faecal Elastase-1 measurement has been shown to be reproducible over time with a mean intra-variation coefficient of 16% reported for patients with chronic pancreatitis over a period of 7 months⁷.

References

1. ScheBo® Biotech AG, Glessen Germany Pancreatic Elastase 1 Stool Test Kit Insert, (June 2005)