

## Beta-Carotene (Serum)

<b>Description</b>	Isomeric form of carotene which is a precursor of Vitamin A. Beta-carotene is a fat-soluble nutrient. It also has anti-oxidant properties.
<b>Indication</b>	<ul style="list-style-type: none"> <li>• To determine if yellow discolouration of the skin is due to hypercarotenaemia</li> <li>• Malabsorption screen</li> </ul>
<b>Additional Info</b>	<p>Vitamin A occurs in two forms: preformed Vitamin A (retinol) and carotenoid pigments (e.g. beta-carotene). Beta-carotene is the most important carotenoid in the UK diet. It undergoes oxidative fission in the intestine to produce retinal and hence retinol. Retinol is transported in the bloodstream by retinol binding protein (RBP).</p> <p>Beta-carotene is found in carrots, dark green leafy vegetables, pumpkins and mangoes. Carotenoid measurement is useful in patients (mainly children) who ingest large quantities of carotenoid-rich processed food e.g. carrot puree in baby foods or coloured fruit drinks. A high intake of beta-carotene results in an orange-yellow appearance of the serum, body fat and skin. Vitamin A toxicity from ingestion of large doses of carotenes does not occur in the short-term since conversion of carotenes into Vitamin A is determined by the existing concentration of Vitamin A, with excess carotene being excreted. Since the body does not store carotenoids, dietary deficiency can deplete serum carotenoid levels in 3-4 weeks.</p> <p>Beta-carotene can also be used as a malabsorption screen because it appears ubiquitously in the diet and is absorbed with intestinal fat.</p>
<b>Concurrent Tests</b>	Other carotenoids e.g. alpha carotene or lycopene can be estimated if required.
<b>Dietary Requirements</b>	Refrain from eating foods containing beta-carotene (carrots, dark green leafy vegetables, pumpkins and mangoes) for 3 days prior to blood test.
<b>Interpretation</b>	See report of contact lab for reference range.
<b>Collection Conditions</b>	Protect from light. Separate serum immediately after collection and freeze. Transport sample frozen.
<b>Frequency of testing</b>	As required.