

## Folate (Folic acid; Vitamin B9)

<b>Description</b>	<p>Folate is a term used for a group of compounds derived from pteroyl glutamic acid (Folic acid), most notably dihydrofolate and tetrahydrofolate.</p> <p>Folate is required for DNA synthesis, repair and methylation so is especially important during periods of rapid cell division and growth, such as in infancy and pregnancy. As such NICE recommends folic acid supplements of 400µg/day prior to conception and during pregnancy to reduce the incidence of foetal neural tube defects.</p> <p>Folate also acts as a co-factor in a number of biological reactions for example, in homocysteine metabolism, and is required for RBC production. As such folate deficiency can lead to megaloblastic anaemia.</p>
<b>Indication</b>	Deficiency: due to malnutrition, malabsorption or increased demand e.g. in pregnancy.
<b>Additional Info</b>	Folate occurs naturally in many foods but particularly in dark green leafy vegetables.
<b>Concurrent Tests</b>	B12; in the differential diagnosis of megaloblastic anaemia.
<b>Dietary Requirements</b>	N/A
<b>Interpretation</b>	4.6 - 18.7 µg/L
<b>Collection Conditions</b>	Serum sample. Haemolysed samples are unsuitable for Folate measurement.
<b>Frequency of Testing</b>	<p>Repeat Folate measurement is unnecessary in patients with Folate deficiency that are on replacement.</p> <p>A full blood count and reticulocyte count should be performed:</p> <ul style="list-style-type: none"> <li>• After approximately 10 days of treatment to document the response.</li> <li>• Then after 8 weeks or on completion of folate treatment to confirm a normal blood count.</li> <li>• On-going monitoring of people being treated with Folic acid is generally considered unnecessary (unless a lack of compliance with treatment is suspected, or anaemia recurs).</li> </ul> <p>(CKS Guidelines: Anaemia – Vitamin B12 and Folate Deficiency; <a href="http://cks.nice.org.uk/anaemia-b12-and-folate-deficiency#!scenario">http://cks.nice.org.uk/anaemia-b12-and-folate-deficiency#!scenario</a>)</p>