



# Folic acid, USP PRODUCT DATA SHEET

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<b>Product Name:</b>	Folic acid, USP
<b>Product Number:</b>	F014
<b>CAS Number:</b>	59-30-3
<b>Molecular Formula:</b>	$C_{19}H_{19}N_7O_6$
<b>Molecular Weight:</b>	441.40
<b>Form:</b>	Powder
<b>Appearance:</b>	Yellow to orange crystalline powder
<b>Solubility:</b>	Acids (dilute): Soluble Alkaline solutions: Soluble Methanol: Slightly soluble Water: Slightly soluble
<b>Water Content (Karl Fischer):</b>	≤8.5%
<b>Melting Point:</b>	250°C
<b>Storage Conditions:</b>	2-8 °C, protect from light and heat
<b>Description:</b>	Folic acid or vitamin B9 and the resulting metabolites are essential to a number of organisms. Folic acid is slightly soluble in aqueous solution (0.076 mg/mL) and dissolves freely in dilute acids and alkaline solutions.
<b>Mechanism of Action:</b>	Cellular enzymes convert folic acid into dihydrofolic acid which is used as a precursor for a number of compounds including tetrahydrofolate (THF) which are involved in DNA repair and synthesis because of its role in purine synthesis.
<b>Microbiology Applications</b>	Folic acid is frequently used in cell culture to provide tetrahydrofolates and other essential metabolites.
<b>References:</b>	Aaronson, S., and et al. "Relationship Between Purines Folic Acid-Vitamins." <i>Journal of Bacteriology</i> 75.6 (1958): 660-65. <a href="http://www.ncbi.gov">www.ncbi.gov</a> . Web. 31 Aug. 2012.

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