Folic acid, USP
PRODUCT DATA SHEET

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Product Name:	Folic acid, USP
Product Number:	F014
CAS Number:	59-30-3
Molecular Formula:	$C_{19}H_{19}N_7O_6$
Molecular Weight:	441.40
Form:	Powder
Appearance:	Yellow to orange crystalline powder
Solubility:	Acids (dilute): Soluble Alkaline solutions: Soluble Methanol: Slightly soluble Water: Slightly soluble
Water Content (Karl Fischer):	≤8.5%
Melting Point:	250°C
Storage Conditions:	2-8 °C, protect from light and heat
Description:	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.
Mechanism of Action:	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.
Microbiology Applications	Folic acid is frequently used in cell culture to provide tetrahydrofolates and other essential metabolites.
References:	Aaronson, S., and et al. "Relationship Between Purines Folic Acid-Vitamins." *Journal of Bacteriology* 75.6 (1958): 660-65. *www.ncbi.gov*. Web. 31 Aug. 2012.