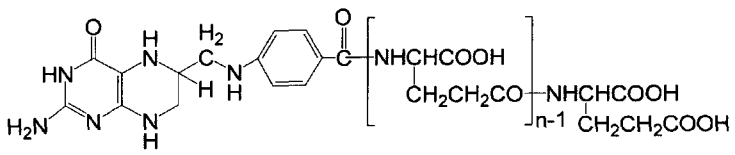

Figure 9 Structural formula of reduced polyglutamyltetrahydrofolate.

A TLC-densitometric method was used to evaluate the purity of folic acid preparations for the purpose of determining the *N*-(4-aminobenzoyl)-L-glutamic acid content as an impurity (Fig. 10) (40). The main advantage of this method was that it ensured achieving reasonable and credible results, and the second feature was its speed.

X. ASCORBIC ACID (VITAMIN C)

Ascorbic acid (L-ascorbic acid), 2,3-endiol-L-gulonic acid-γ-lactone, is biosynthesized in all chlorophyll-containing plants and in the liver and kidney of most mammals, amphibians, reptiles, and

Table 9 TLC of Naturally Occurring Folates (Pteroylmonoglutamates) and Pteroate on MN 300 UV_{254} Powder

Compound[a]	NH_4Cl[b]	Sodium phosphate[c]		Detection[d]
		A	B	
Pte	0[f]	0	0	Q/A
H_2—PteGlu	10	26	24	BF/BF
PteGlu[e]	24	56	40	Q/A
5,10-CH=H_4—PteGlu	32[g]	79[g]	45[g]	Q-BF/BF
H_4—PteGlu[e]	56	70	59	BF/BF
5-CHO—H_2—PteGlu[e]	72	85	76	Q/YBF
5-HCNH—H_4—PteGlu	72	85		Q/
5,10-CH_2—H_4—PteGlu	75[g]		82[g]	Q/
5-CH_3—H_4—PteGlu[e]	80	86	79	Q/
10-CHO—H_4—PteGlu	82	81	82	Q/
5-CH_3—H_4—PteGlu	87	58	84	Q/
10-CHO—PteGlu	70	58		Q/
10-CHO—H_2—PteGlu	73	72		Q/BF

[a]All tetrahydro compounds and 5-CH_3— and 5,6-H_2—PteGlu are racemic mixtures with the exception of *l*-5-formimino-tetrahydropteroylglutamate.
[b]3.0% (w/v) NH_4Cl containing 0.5% (v/v) 2-mercaptoethanol as antioxidant (pH 6.2).
[c](A) 0.1 M sodium phosphate buffer, pH 7.0, and (B) 0.1 M sodium phosphate buffer, pH 6.0, both containing 0.5% (v/v) 2-mercaptoethanol.
[d]Exposure to UV light at 254 and 366 nm. Abbreviations: A, absorption; B, blue; F, fluorescence; Q, quench; and Y, yellow.
[e]Compounds also applied in their radioactive forms.
[f]Mean R_f values × 100 of 2–11 determinations.
[g]Elongated spot.
Source: Ref. 39.