

Table IV. *Estimation of AdN Binding Site Concentrations in Maize Mesophyll Chloroplasts*

| Enzymes | ATP | ADP | AMP |
|--|------|-----------|------|
| | | <i>mM</i> | |
| CF ₁ ^a | 0.18 | 0.18 | |
| PPDK ^b | 0.36 | | 0.36 |
| Adenylate kinase ^c | 0.24 | 0.48 | 0.24 |
| 3-Phosphoglycerate kinase ^d | 0.02 | 0.02 | |
| Total | 0.80 | 0.68 | 0.60 |

^a Based on CF₁/Chl ratio of 1/700 with spinach leaves (32) and three catalytic ADP sites/CF₁. ^b Based on maize PPDK specific activity of 10 units mg⁻¹ protein (2), a mol wt of the subunit of maize PPDK of 94,000 (11), and PPDK activity of 300 μmol·mg⁻¹ Chl in maize leaves (42) with 60% of total maize Chl in mesophyll chloroplasts. ^c Based on a specific activity of maize adenylate kinase of 1270 units·mg⁻¹ protein (22), a mol wt of maize adenylate kinase of 29,000 (23), maize adenylate kinase activity of 220 units·mg⁻¹ mesophyll Chl (17) and on the number of binding sites of ATP, ADP, and AMP being one, two, and one, respectively. Activity of adenylate kinase in mesophyll cells is mainly found in chloroplasts (17). ^d Based on the specific activity of the enzyme being 900 units mg⁻¹ protein and having a mol wt of 48,000 with *Beta vulgaris* (26) and an enzyme activity of 1,300 μmol·mg⁻¹ mesophyll Chl with maize mesophyll protoplasts (25). This enzyme is also localized in the cytoplasm, so this is the maximum estimate.