

Table 5. Comparisons of photochemical activities of isolated mesophyll (M) and bundle sheath cell (B) chloroplasts from leaves of C₄ plants (μmol/min/mg chl.)

Component process	Assay system	<i>A. spongiosa</i>		<i>Z. mays</i>		<i>S. bicolor</i>	
		M	B	M	B	M	B
Electron transport							
Photo-system I and II	(H ₂ O→NADP)	2.6	2.3 ^a	3.2	0.8 ^b	2.7	0 ^c
Photo-system II	K ₃ Fe(CN) ₆			10.3	2.7 ^c	13.6	0.9 ^d
	TCPIP, DCPIP			21.0	6.0 ^b		
Photo-system I	DCPIP Ascorbate → NADP			7.0	2.3 ^c	8.7	0.6 ^c
	DCPIP Ascorbate → Methylviologen	5.5	7.8 ^f			4.5	0.7 ^e
Photophosphorylation							
Photo-system II	K ₃ Fe(CN) ₆	6.3	3.8 ^g	1.6	0.3 ^h	4.1	0.3 ^g
				3.6	0.3 ^g	4.0	0.4 ^c
Photo-system I	PMS	15.7	8.7 ^g	10.1	5.2 ^g	10.6	4.8 ^g
				8.7	7.3 ^h	10.3	9.5 ^e

^a Woo et al. (1970). ^b BISHOP et al. (1972b). ^c ANDERSON et al. (1972). ^d SMILLIE et al. (1972a). ^e ARNTZEN et al. (1971). ^f OSMOND (1974). ^g POLYA and OSMOND (1972). ^h ANDERSON et al. (1971).