

Table 5. Rates of electron transfer between cytochrome *f*, cytochrome *c*-552 and plastocyanin from various organisms

The rate constants in (a) were derived from log plots of pseudo first-order reactions, as in [23]. The buffer was 10 mM phosphate, pH 7, plus 80 mM NaCl, at 25 °C. The measurements were made with the dual wavelength spectrophotometer, the wavelength pairs being 409 and 422 nm, 415.5 and 422.5 nm, and 405 and 417 nm respectively

Reactants		Rate constant, <i>k</i>	Reference
reduced	oxidised		
		M ⁻¹ s ⁻¹	
(a) <i>Chlamydomonas reinhardtii</i> proteins			
Cytochrome <i>f</i>	Plastocyanin	> 1 × 10 ⁷	
Cytochrome <i>f</i>	Cytochrome <i>c</i> -552	> 1 × 10 ⁷	
Cytochrome <i>c</i> -552	Plastocyanin	4 × 10 ⁶	
(b) Earlier work			
Parsley cytochrome <i>f</i>	Parsley plastocyanin	3.6 × 10 ⁷	[23]
<i>Euglena</i> cytochrome <i>f</i>	<i>Euglena</i> cytochrome <i>c</i> -552	> 1 × 10 ⁷	[5]
<i>Euglena</i> cytochrome <i>f</i>	Parsley plastocyanin	> 9 × 10 ⁶	[5]
<i>Plocanium</i> cytochrome <i>c</i> -553	Parsley plastocyanin	5 × 10 ⁶	[23]
<i>Euglena</i> cytochrome <i>c</i> -552	Parsley plastocyanin	9 × 10 ⁴	[5]
(c) Electron exchange reactions			
Bean plastocyanin	Bean plastocyanin	≪ 2 × 10 ⁴	[39]
<i>Euglena</i> cytochrome <i>c</i> -552	<i>Euglena</i> cytochrome <i>c</i> -552	5 × 10 ⁶	[40]