

Table 4.1 Catalytic variation at 25 °C among the Rubisco superfamily

Rubisco form	Organism	k_{cat}^C (s ⁻¹)	K_C (μM)	K_O (μM)	S_{CO} (mol.mol ⁻¹)	k_{cat}^O (s ⁻¹)
IB	C ₃ -plants ^a	2.2–3.6	8–16	230–600	80–100	1.1–2.1
	C ₄ -NAD ME ^a	2.1–3.4	7–13	270–445	80–85	0.9–1.6
	C ₄ -NADP ME ^b	3.9–6.0	18–19	470–620	70–80	2.0–2.8
	C ₄ -PCK ^a	5.0–5.7	14–16	265–470	78–85	1.3–2.2
	β-cyanobacteria ^a	11.6–14.3	250–340	200–440	41–52	<0.5
IC	Proteobacteria ^a	4.1	58	1130	60	1.4
ID	Red algae ^a	1.2–2.6	29.9	306	79	1.0
	Diatoms ^a	2.1–3.7	23–65	420–1200	57–120	0.4–1.3
II	Proteobacteria ¹	6–9	40–150	160–300	9–41	<1.5
	Dinoflagellates ^{c,d}	1.2	n.d	n.d	37 ^f	n.d
III	Archaea ^e	<2	52–130	2–100	1–11	<0.4

Organisms with a CCM are shaded in grey

n.d not determined

^aYoung et al. [92]

^bSharwood et al. [67]

^cLeggat et al. [42]

^dWhitney and Andrews [81]

^eAlonso et al. [2] and Wilson et al. [89]

^fValues measured at 10 °C

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