

TABLE 1.5. Elemental Composition of *Laminaria* (Marine Phaeophyte Macroalga)
[From Vinogradov, 1953; Floc'h, Penot, 1970, 1976; Mann, 1972] and the
Concentration of Available Sources of the Elements in Seawater [From Redfield, 1958;
Sipos et al., 1980]

Element	Sea water (mol m ⁻³)	<i>Laminaria</i> (mol m ³ plant volume) ⁻¹	Sea water	<i>Laminaria</i> (mol per 1,000 mol C)
C	2.28 (CO ₂ + HCO ₃ ⁻ + CO ₃ ²⁻)	4,650	1,000	1,000
N	0.001-0.030 (NH ₄ ⁺ + NO ₃ ⁻)	165-330	0.5-15	36-72
S	29 (SO ₄ ²⁻)	54-111	12,720	11.5-23.8
P	0.1-2.0 (HPO ₄ ²⁻)	1.8-7.5	0.5-1.0	0.4-1.7
K	10.6 (K ⁺)	144-645	4,650	30-140
Na	482 (Na ⁺)	112-330	211,400	25-71
Ca	10.6 (Ca ²⁺)	24-435	4,650	5.2-9.3
Mg	55 (Mg ²⁺)	30-84	24,080	6.5-18
Cl	566 (Cl ⁻)	330-540	248,250	71-116