

Table S1: Concentrations of main nutrients in *Laminaria japonica* fermented with *Pediococcus acidilactici* FZU106.

Item	Unfermented group (g/100 g)	Fermented group (g/100 g)
Crude proteins	12.15 ± 3.67%	11.65 ± 2.13%
Total dietary fiber	36.43 ± 2.41%	33.25 ± 3.58%
Crude lipid	1.35 ± 0.05%	1.32 ± 0.00%
Moisture	12.58 ± 1.22%	12.75 ± 2.04%
Ash	10.31 ± 1.85%	10.22 ± 0.67%

Laminaria japonica was fermented using *Pediococcus acidilactici* FZU106 under the following conditions: 16–20 h at 37 °C. All data are expressed as mean ± SD ($n = 3$). No significant differences were observed between unfermented and fermented groups for all items.