Effects of spirulina and wakame consumption on intestinal cholesterol absorption and serum lipid concentrations in non-hypercholesterolemic men and women

- Supplemental Materials -

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### Supplemental Tables

**Supplemental table 1**: Sterol composition of the spirulina and wakame supplements as determined by gas-chromatography flame-ionization-detection (GC-FID) by Bonn University

|                  | Spirulina |          | Wakame |          |
|------------------|-----------|----------|--------|----------|
|                  | ng/mg     | µg/day   | ng/mg  | µg/day   |
| Cholesterol      | 7.8       | 37.4     | -      | -        |
| 24-methyl cholesterol | 7.7   | 37.0     | 65.1   | 312.5    |
| Campesterol      | 4.9       | 23.5     | -      | -        |
| Sitosterol       | 19.3      | 92.6     | -      | -        |
| Stigmasterol     | 11.5      | 55.2     | -      | -        |
| Fucosterol       | -         |          | 476.6  | 2287.7   |
| 24 R/S saringosterol | -     |          | 17.4   | 83.5     |

**Supplemental table 2**: Lipid concentrations after spirulina, wakame and placebo intake in the 50% highest absorbers (N = 17) and the 50% lowest absorbers (N = 18)

|                  | Highest cholesterol absorbers | Lowest cholesterol absorbers |
|------------------|--------------------------------|-------------------------------|
|                  | Spirulina | Wakame | Placebo | P<sup>a</sup> | Spirulina | Wakame | Placebo | P<sup>a</sup> |
| Total cholesterol (mmol/L) | 4.28 ± 0.76 | 4.42 ± 0.89 | 4.48 ± 0.84 | 0.269 | 5.13 ± 1.04 | 5.24 ± 1.02 | 5.11 ± 1.26 | 0.645 |
| LDL cholesterol (mmol/L)<sup>b</sup> | 2.24 ± 0.57 | 2.33 ± 0.75 | 2.34 ± 0.73 | 0.575 | 3.26 ± 0.83 | 3.24 ± 0.92 | 3.21 ± 1.01 | 0.871 |
| HDL cholesterol (mmol/L) | 1.65 ± 0.42 | 1.65 ± 0.43 | 1.72 ± 0.51 | 0.429 | 1.43 ± 0.39 | 1.52 ± 0.36 | 1.42 ± 0.41 | 0.119 |
| Triacylglycerol (mmol/L) | 0.86 ± 0.34 | 0.96 ± 0.46 | 0.93 ± 0.35 | 0.422 | 1.16 ± 0.46 | 1.07 ± 0.48 | 1.03 ± 0.39 | 0.488 |

<sup>a</sup>P-value for the treatment effect

<sup>b</sup>N = 17 in the ‘lowest cholesterol absorbers’ for LDL cholesterol