

Table S1. Elemental composition of *Spirulina* dietary supplements from the Slovenian market.

| S. No. ¹ | Si (g/kg) | P (g/kg) | S (g/kg) | Cl (g/kg) | K (g/kg) | Ca (g/kg) | Ti (mg/kg) | Mn (mg/kg) | Fe (g/kg) | Zn (mg/kg) | Br (mg/kg) | Rb (mg/kg) | Sr (mg/kg) |
|------------------------|--------------|-------------|-------------|--------------|-------------|--------------|---------------|---------------|--------------|---------------|---------------|---------------|------------|
| S1 | 1.57 | 10.5 | 7.53 | 0.66 | 16.1 | 8.18 | 18.2 | 43.4 | 0.81 | 14.0 | 1.29 | 1.55 | 37.9 |
| S2 | 7.69 | 11.4 | 7.53 | 3.07 | 14.8 | 1.32 | 56.9 | 159 | 3.29 | 43.6 | 11.2 | 7.47 | 10.0 |
| S3 | 1.16 | 10.6 | 8.64 | 3.18 | 15.4 | 0.82 | 5.45 | 29.4 | 0.49 | 8.33 | 1.91 | 1.67 | 17.8 |
| S4 | 13.5 | 10.0 | 7.57 | 5.77 | 17.1 | 2.20 | 46.5 | 128 | 3.48 | 52.7 | 16.5 | 11.9 | 24.3 |
| S5 | 1.34 | 12.4 | 9.04 | 3.78 | 20.8 | 0.74 | 8.77 | 22.1 | 0.48 | 14.6 | 1.77 | 1.23 | 25.1 |
| S6 | 21.7 | 12.7 | 6.47 | 0.09 | 11.0 | 1.28 | 9.31 | 54.9 | 0.90 | 13.9 | 0.50 | 4.12 | 10.2 |
| S7 | 10.7 | 11.8 | 7.77 | 0.60 | 14.3 | 5.10 | 3.96 | 32.8 | 0.37 | 10.4 | 0.47 | 0.81 | 22.1 |
| S8 | 16.0 | 11.5 | 7.53 | 1.03 | 14.7 | 2.04 | 60.6 | 35.0 | 1.39 | 16.0 | 0.91 | 0.91 | 27.3 |
| S9 | 5.21 | 5.06 | 3.14 | 2.61 | 19.7 | 2.83 | 10.4 | 43.0 | 0.44 | 19.1 | 10.8 | 3.75 | 12.7 |
| S10 | 2.34 | 14.1 | 9.38 | 2.11 | 18.5 | 3.09 | 35.5 | 36.6 | 1.68 | 18.5 | 1.34 | 1.58 | 34.7 |
| S11 | 1.42 | 12.9 | 8.29 | 0.48 | 15.2 | 1.20 | 4.42 | 26.5 | 0.57 | 11.1 | 1.19 | 1.07 | 28.2 |
| S12 | 1.63 | 13.9 | 8.42 | 1.77 | 16.8 | 5.24 | 12.3 | 38.2 | 1.38 | 33.0 | 1.39 | 1.48 | 31.8 |
| S13 | 16.6 | 12.6 | 7.79 | 1.97 | 15.5 | 5.39 | 14.8 | 34.4 | 1.79 | 33.6 | 1.47 | 0.92 | 31.1 |
| S14 | 7.94 | 12.2 | 7.54 | 0.19 | 13.6 | 1.00 | 9.91 | 34.9 | 0.69 | 16.5 | 0.57 | 2.23 | 7.41 |
| S15 | 1.43 | 11.9 | 7.32 | 0.21 | 13.7 | 0.89 | 5.07 | 33.3 | 0.66 | 15.7 | 0.48 | 1.60 | 6.82 |
| S16 | 1.59 | 14.7 | 7.50 | 0.52 | 14.3 | 2.78 | 6.08 | 36.3 | 0.65 | 17.5 | 0.91 | 0.50 | 12.7 |
| S17 | 1.61 | 13.5 | 8.64 | 2.21 | 16.6 | 5.34 | 12.3 | 30.9 | 1.74 | 34.9 | 1.88 | 1.20 | 32.3 |
| S18 | 2.74 | 12.6 | 6.17 | 0.60 | 8.63 | 63.5 | 43.1 | 47.1 | 0.75 | 11.1 | 9.11 | 2.55 | 478 |
| S19 | 19.4 | 12.2 | 9.29 | 2.55 | 18.4 | 28.0 | 15.9 | 30.3 | 0.56 | 9.74 | 2.26 | 1.24 | 27.6 |
| S20 | 16.8 | 12.1 | 8.39 | 3.04 | 16.3 | 2.43 | 47.5 | 29.1 | 1.13 | 23.0 | 2.00 | 1.91 | 32.2 |
| S21 | 14.7 | 9.77 | 7.30 | 1.94 | 16.2 | 1.35 | 28.2 | 150 | 0.69 | 22.4 | 3.09 | 2.97 | 9.66 |
| S22 | 1.85 | 6.82 | 3.60 | 0.55 | 7.40 | 1.37 | 11.1 | 21.1 | 0.39 | 7.69 | 1.24 | 1.06 | 8.00 |
| S23 | 15.1 | 11.2 | 7.12 | 1.12 | 14.2 | 2.03 | 65.8 | 28.3 | 1.39 | 14.0 | 0.88 | 0.78 | 28.0 |
| S24 | 1.40 | 9.27 | 6.05 | 0.87 | 12.5 | 2.45 | 19.0 | 88.3 | 0.77 | 15.4 | 1.04 | 1.16 | 11.2 |
| S25 | 15.4 | 9.61 | 8.32 | 2.68 | 17.3 | 1.02 | 9.37 | 51.5 | 0.60 | 10.0 | 1.60 | 1.43 | 18.7 |
| S26 | 15.0 | 10.9 | 7.91 | 5.63 | 17.5 | 2.28 | 42.3 | 185 | 3.09 | 35.5 | 17.4 | 9.96 | 14.1 |
| S27 | 1.79 | 11.2 | 8.30 | 2.07 | 16.8 | 0.80 | 8.61 | 22.8 | 0.72 | 15.6 | 1.27 | 1.04 | 22.3 |
| S28 | 4.91 | 10.3 | 8.66 | 3.47 | 17.4 | 0.72 | 2.58 | 26.2 | 0.47 | 7.27 | 2.54 | 2.44 | 15.4 |
| S29 | 15.6 | 10.9 | 7.24 | 1.67 | 15.6 | 1.62 | 35.7 | 192 | 1.14 | 20.9 | 2.71 | 2.06 | 15.6 |
| S30 | 15.1 | 10.1 | 6.99 | 1.63 | 15.2 | 1.50 | 34.5 | 195 | 1.12 | 21.7 | 3.21 | 1.33 | 15.2 |
| S31 | 1.53 | 11.4 | 6.72 | 1.36 | 14.7 | 1.67 | 13.0 | 178 | 0.78 | 22.0 | 1.82 | 2.85 | 7.85 |
| S32 | 16.1 | 10.2 | 8.15 | 2.62 | 14.2 | 2.54 | 39.4 | 35.9 | 1.39 | 22.9 | 1.86 | 2.30 | 35.5 |
| S33 | 1.06 | 10.2 | 7.99 | 2.18 | 14.9 | 1.00 | 5.84 | 28.0 | 0.64 | 5.42 | 1.62 | 1.55 | 29.7 |
| S34 | 16.9 | 10.9 | 8.09 | 4.34 | 15.9 | 0.91 | 7.82 | 27.8 | 0.52 | 11.3 | 4.47 | 0.57 | 31.2 |
| S35 | 7.52 | 10.1 | 7.85 | 2.20 | 14.4 | 0.96 | 6.85 | 26.5 | 0.63 | 7.18 | 2.38 | 1.27 | 26.3 |
| S36 | 1.97 | 11.4 | 7.10 | 2.58 | 14.9 | 2.17 | 24.7 | 34.5 | 1.01 | 17.0 | 6.74 | 1.23 | 55.0 |
| S37 | 6.43 | 6.16 | 3.88 | 0.91 | 5.83 | 0.75 | 12.8 | 19.3 | 0.28 | 6.02 | 1.67 | 0.55 | 9.75 |
| S38 | 7.56 | 10.3 | 8.04 | 0.30 | 9.00 | 4.93 | 2.81 | 24.9 | 0.41 | 13.3 | 0.67 | 1.33 | 26.1 |
| S39 | 12.1 | 9.93 | 6.71 | 1.76 | 12.7 | 0.97 | 8.88 | 14.7 | 0.44 | 13.1 | 1.86 | 0.99 | 19.8 |
| S40 | 8.49 | 10.2 | 8.06 | 0.34 | 8.84 | 5.52 | 4.39 | 28.3 | 0.42 | 14.7 | 0.85 | 1.09 | 29.3 |
| S41 | 0.94 | 8.64 | 7.18 | 5.03 | 16.4 | 0.52 | 3.58 | 18.6 | 0.38 | 10.3 | 2.93 | 2.42 | 15.9 |
| S42 | 1.07 | 10.1 | 7.72 | 4.70 | 15.1 | 0.69 | 8.89 | 29.1 | 0.55 | 9.91 | 3.78 | 1.21 | 23.7 |
| S43 | 1.34 | 10.1 | 9.91 | 5.34 | 15.7 | 1.42 | 3.16 | 23.2 | 0.41 | 2.30 | 5.51 | 1.34 | 71.8 |
| S44 | 0.78 | 8.56 | 6.63 | 2.75 | 20.6 | 3.45 | 10.4 | 84.9 | 0.69 | 24.9 | 8.00 | 6.55 | 86.2 |
| S45 | 1.02 | 11.0 | 7.87 | 1.13 | 14.3 | 1.26 | 3.18 | 27.4 | 0.45 | 18.1 | 1.43 | 1.47 | 22.0 |
| S46 | 0.68 | 6.64 | 7.38 | 5.36 | 26.9 | 0.46 | 5.36 | 32.9 | 0.93 | 7.59 | 7.07 | 4.21 | 4.39 |

¹ Sample number.

Table S2. Composition of Zarrouk's medium [1].

| Constituents | Content (g/L) |
|--|---------------|
| K ₂ HPO ₄ | 0.5 |
| NaNO ₃ | 2.5 |
| K ₂ SO ₄ | 1.0 |
| NaCl | 1.0 |
| MgSO ₄ · 7H ₂ O | 0.2 |
| CaCl ₂ · 2H ₂ O | 0.04 |
| FeSO ₄ · 7H ₂ O | 0.01 |
| EDTA | 0.08 |
| NaHCO ₃ | 16.8 |
| | Content (mL) |
| Micronutrient solution | |
| (H ₃ BO ₃ (2.86 g/L), MnCl ₂ · 4H ₂ O (1.81 g/L), ZnSO ₄ · 4H ₂ O (0.222 g/L), Na ₂ MoO ₄ (0.0177 g/L), CuSO ₄ · 5H ₂ O (0.079 g/L)) | 1.0 |

Reference:

1. Michael, A.; Kyewalyanga, M.S.; Mtolera, M.S.; Lugomela, C.V. Antioxidants Activity of the Cyanobacterium, *Arthrospira (Spirulina) Fusiformis* Cultivated in a Low-Cost Medium. *Afr. J. Food Sci.* **2018**, *12*, 188–195, doi:10.5897/AJFS2018.1688.

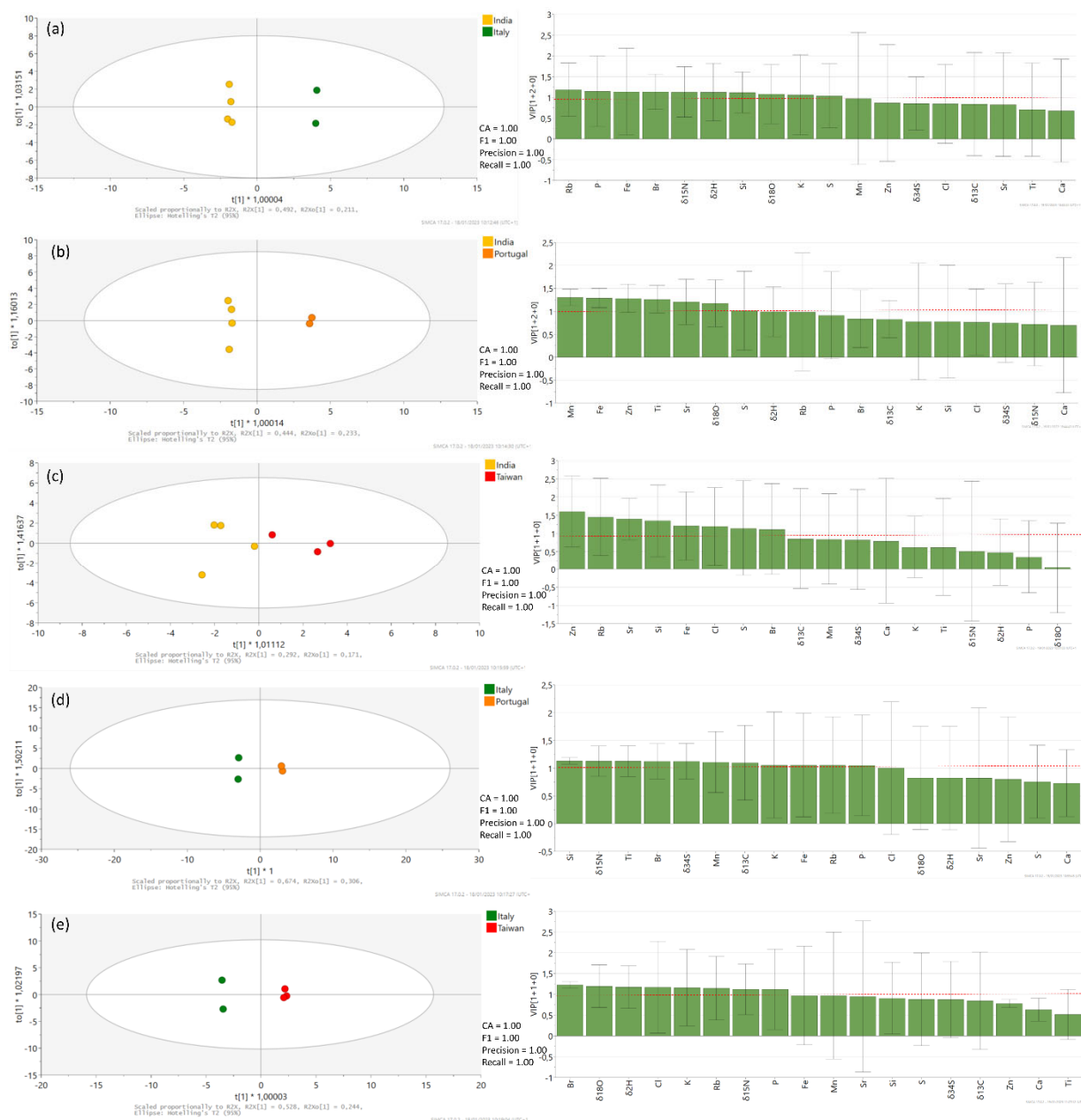


Figure S1: Pairwise comparisons between different declared countries of origin of *Spirulina* products: OPLS-DA score plots and VIP values, derived from all isotopic and elemental composition data. The ellipse on the score plot represents the 95% confidence interval. Red dotted line indicates a criteria for identification of the variables, important for the developed model. Separation of India from Italy (a), Portugal (b), Taiwan (c) and separation of Italy from Portugal (d) and Taiwan (e).

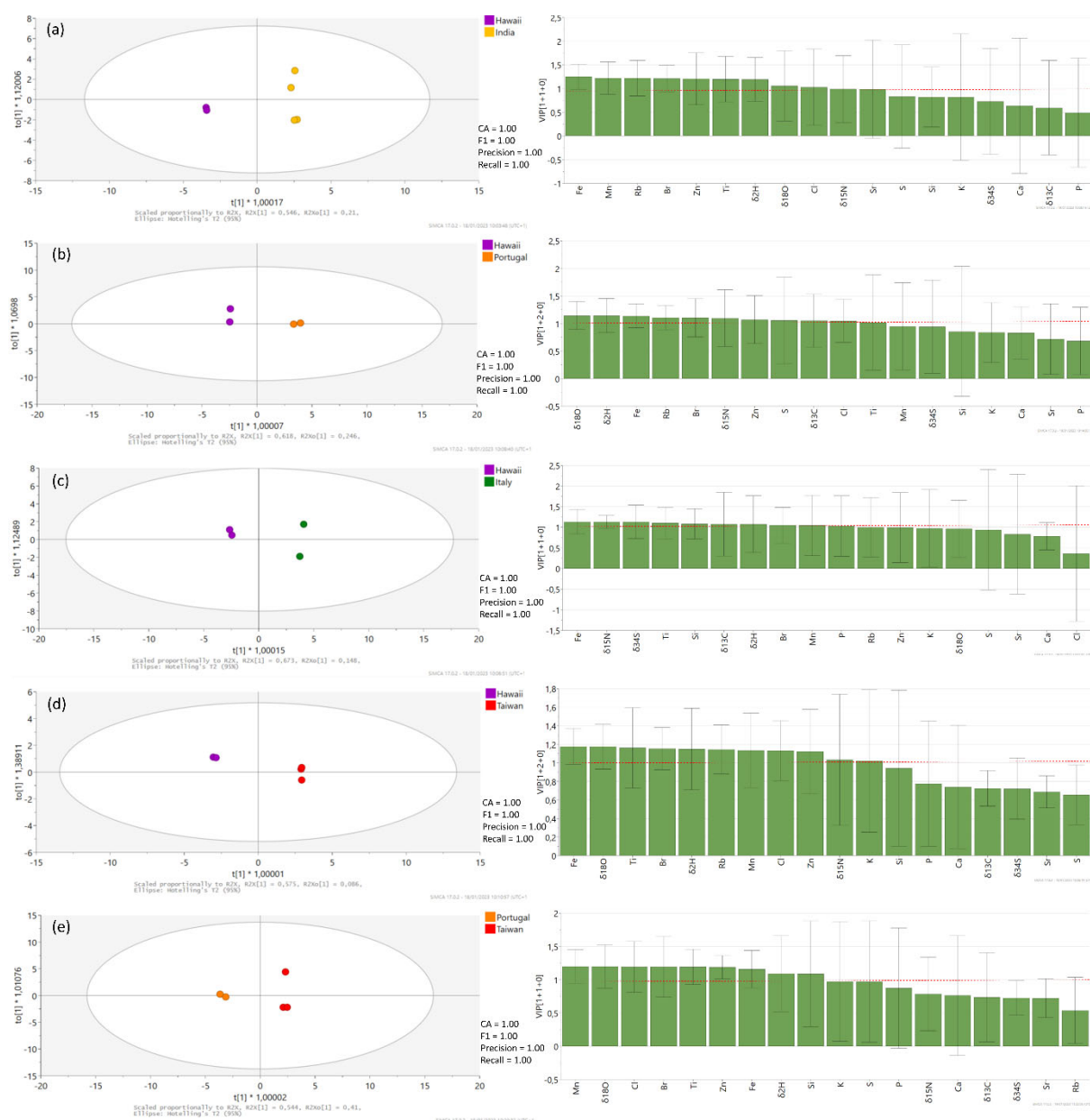


Figure S2: Pairwise comparisons between different declared countries of origin of *Spirulina* products: OPLS-DA score plots and VIP values, derived from all isotopic and elemental composition data. The ellipse on the score plot represents the 95% confidence interval. Red dotted line indicates a criteria for identification of the variables, important for the developed model. Separation of Hawaii from India (a), Portugal (b), Italy (c), Taiwan (d) and separation of Portugal and Taiwan (e).