Supplementary material

Unveiling the Skin Anti-Aging Potential of the Novel *Spirulina platensis* Extract Elixspir®

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A preliminary chemical qualitative analysis was performed by High-Resolution Quadrupole Time of Flight (HR-QTOF) analysis. The Elixspir® 18% w/w aqueous extract was centrifuged before analysis. Table 1 summarizes the most abundant species detected using an untargeted QTOF-HR-ESI-MS approach.

Table S1. Qualitative HR-QTOF analysis of most abundant compounds detected.

m/z	Tentative identification	Adduct ion	Chemical Class
191.0195	Citric acid	$[M-H]^-$	Organic acid
238.2578	Tetrahydrobiopterin	$[M-H]^+$	Other
259.1297	gamma-Glutamyl(iso)leucine	$[M-H]^-$	Peptide
293.0676	Glutamylphenylalanine	$[M-H]^-$	Peptide
368.1206	Methoxycarbonylethyl-guanosine	$[M-H]^-$	Nucleotide
406.1258	Fructose malate fumarate	$[M-H]^-$	Carbohydrate
459.2156	Xyl(b1-2)Glc(b1-2)b-D-Fuc	$[M-H]^-$	Carbohydrate
493.1980 215.08	Fucose-PMP	$[M-H]^-$	Carbohydrate
509.1490	Hexose-PMP	$[M-H]^-$	Carbohydrate

215.08			

In addition, the total carbohydrate content was analyzed by the phenol–sulfuric acid method with glucose as a standard, and the protein content was determined using the Lowry assay by employing bovine serum albumin (BSA) as standard [S1][S2]. In addition, phycocyanin content was determined by the method of Boussiba and Richmond spectrophotometrically at 620 nm [S3].

These results confirmed that Elixspir® extract is characterized by a significant amount of carbohydrates (57.3 ± 4.6%) whereas phycocyanin and protein levels were very modest (6.0 ± 1.1% and 12.0 ± 3.2%, respectively).

References

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