Designing a new product, called Mediterranean Greek Salad, as a dietary supplement from artichoke, broccoli and spinach extractions

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The present study was designed to suggest a dietary supplement based on a synthesis of definite vegetables extractions. This nutritional supplement could be available in powder form and its synthesis would include artichoke, broccoli and spinach extracts according to the following portion. 100 g of powder will contain 40 g Cynara scolymus extr. powder, 30 g Brassica oleracea extr. powder and 30 g Spinacia oleracea extr. powder. Apart from their high content in vitamins and minerals, artichoke, broccoli and spinach are particularly rich in polyphenols, fatty acids, plant sterols, sugars, amino acids and others. Composition varies according to the origin, the climate and the extraction procedure used. Cynarin, scolymoside, luteolin and chlorogenic acid are the active ingredients in artichoke. Glucosinolates (indoles, isothiocyanates) and sulforaphane are responsible for broccoli’s reported beneficial health effects. Spinach is an excellent source of iron and vitamins A, C and K. Thanks to their constituents, artichoke, broccoli and spinach exhibit numerous beneficial effects: antioxidant, anti-inflammatory, cardioprotective, antitumor, and antimicrobial.

Beta-carotene was measured by HPLC. ORAC was measured by LSM. Nutritional compounds were measured by standard methodology. The total Oxygen Radical Absorbance/Antioxidant Capacity (ORAC) for the above powder synthesis was determined to be 18720 umol TE/100g. Proteins, fats, carbohydrates, dietary fiber, moisture and ash are estimated to be 16.9, 0.8, 25.9, 36.2, 6.6, 13.6 g/100g, respectively with an energy of 251 kcal. Beta-carotene is estimated to be 0.58 mg/100 g. Vitamin A has an activity of 964 IU/100 g. Cantaxanthine (E161) and E160 were below the limit of quantification. Regarding nutritional elements these are estimated to be as follows. Iron is 94.9 mg/100 g, magnesium 0.33 mg/100 g, potassium 1.82 g/100 g and sodium 0.83 g/100 g.