**Abstract**

Micronutrients are an important part of human nutrition that support survival and functioning of the body. Vegetables play a major role in the supply of micronutrients to human diet. In this study, different ratios of F1 (1:1:1), F2 (2:1:1), F3 (1:1:2) and F4 (1:2:1) by weight of solar-dried *Moringa oleifera* leaves (ML), *Ipomoea batatas* leaves (IBL) and *Daucus carota* (DC) were studied to determine the optimum mix for a novel product formulation. Atomic absorption spectrophotometer (AAS) was used for the evaluation of iron and zinc, while β-carotene was analysed by high-performance liquid chromatography (HPLC). Results for iron in the formulated products were 39.71, 58.54, 19.41 and 50.98 mg/100g for F1, F2, F3 and F4, respectively. On the other hand, zinc values were 1.75, 2.15, 1.40 and 1.80 mg/100g for F1, F2, F3 and F4, respectively. Beta-carotene values were 3.58, 4.16, 4.34 and 2.40 mg/100g for F1, F2, F3 and F4, respectively. A significant variation in zinc, iron and β-carotene among all formulations (*p* < 0.05) was observed. Formulation F2 was highly associated with zinc (R2 = 0.963) and iron (R2 = 0.998) and based on these parameters was selected as the best novel vegetable product formulation. Therefore, mixed solar-dried vegetables powder at a ratio of 2:1:1 for ML, IBL and DC, respectively, can be promoted to ensure the supply of iron, zinc and β-carotene in the diet throughout the year.