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INNOVATIVE RAW VEGAN DESSERTS - ASSESSING ANTIOXIDANT, NUTRITIONAL AND SENSORY PROPERTIES

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Abstract: Raw vegan foods are those foods that are prepared only from raw, non-heat-processed raw vegetable materials and auxiliaries. These have the great advantage of keeping intact vitamins, enzymes and other thermolabile bioactive compounds, bringing added health and vitality to consumers. The aim of this work was to obtain two varieties of sugar-free raw vegan desserts, using avocado pulp, banana pulp and dates as raw materials: one with added cocoa powder and nutmeg essential oil (RVD1), and the second with added carob powder and black pepper essential oil (RVD2). Finished products obtained, as well as the raw materials used, were analyzed in terms of total polyphenol content (TPC) (Folin-Ciocalteu method), antioxidant activity (free radical 2,2-diphenyl-1-picrylhydrazyl assay), proximate composition and sensory properties (5-point hedonic scale method). From the raw materials, cocoa powder stood out with the highest TPC (10.15 ± 0.14 mg GAE/g) and the strongest 2,2-diphenyl-1-picrylhydrazyl free radical scavenging activity ($95.21 \pm 0.34\%$), followed by carob powder (7.02 ± 0.06 mg GAE/g, respectively $90.31 \pm 0.27\%$). In terms of finished products, the RVD1 assortment had the highest TPC and the best antiradical activity (2.07 ± 0.03 mg GAE/g, $12 \pm 0.33\%$). In terms of proximate composition, the two varieties of raw vegan desserts had very similar values, the RVD2 version being slightly richer in total carbohydrates, sugars and dietary fiber. The sensory evaluation of the products resulted in very good scores (from 4.60 upwards) for all the characteristics analyzed. With the exception of texture, where both products were evaluated identically (4.85) for all other organoleptic attributes the RVD2 variant obtained higher scores than RVD1.

Results and discussion

Table1.
Total polyphenol content in raw materials and finished products

Sample	Total polyphenols (mg GAE/g)
Banana pulp	0.86 ± 0.03
Avocado pulp	0.28 ± 0.01
Dates	1.02 ± 0.02
Cashew nuts	3.98 ± 0.08
Goji berries	54.74 ± 0.28
Cocoa powder	10.15 ± 0.14
Carob powder	7.02 ± 0.06
RVD1	2.07 ± 0.03
RVD2	1.58 ± 0.02



Conclusions

The sugar-free, raw-vegan dessert creams developed in this paper are a much healthier alternative to the sugar-laden, processed and additive-loaded dessert creams on the market. The products developed in this work, even though they have a short shelf life, are very rich in polyphenolic compounds, have very good antioxidant activity, are not thermally processed, thus keeping intact the thermolabile bioactive compounds, contain no added sugar - thus being suitable also for people with sugar restrictions, contain no animal products, making them suitable for vegans, and have very good organoleptic properties. Our health and that of our planet deserve such products.

Table2.
Free radical DPPH scavenging activity (RSA) (%) for raw materials and finished products

Sample	RSA (%)
Banana pulp	86.36 ± 0.23
Avocado pulp	87.51 ± 0.21
Dates	84.42 ± 0.22
Cashew nuts	83.02 ± 0.28
Goji berries	98.74 ± 0.36
Cocoa powder	95.21 ± 0.34
Carob powder	90.31 ± 0.27
RVD1	90.12 ± 0.33
RVD2	89.08 ± 0.32

