UNIVERSITY OF LIFE SCIENCES "KING MIHAI I" FROM TIMIŞOARA
"YOUNG PEOPLE AND MULTIDISCIPLINARY RESEARCH IN APPLIED LIFE SCIENCES"
05-06 November 2026



DEVELOPMENT AND PHYSICOCHEMICAL AND SENSORY CHARACTERIZATION OF CHIA SEED PUDDING WITH PEAR, QUINCE, AND BEETROOT JAM

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Abstract: This study aimed to develop and characterize an innovative chia seed pudding with pear, quince, and beetroot jam, evaluating its physicochemical and sensory properties. Chia seeds were hydrated in plant-based milk, the jam was obtained by thermal concentration, and the product was assembled and analyzed. The vitamin C content, moisture and ash were determined, and a sensory evaluation was conducted using a five-point hedonic scale with 16 panelists. The chia pudding with jam showed high sensory acceptability, with a mean score of 4.75 for taste and 4.69 for overall acceptability. The product contained 12.3 mg/100 g of vitamin C and 75.4% moisture. The results highlight the potential of combining chia seeds with pear, quince, and beetroot jam to obtain an innovative and nutritious dessert.

• Introduction

Chia seeds (*Salvia hispanica*) are a valuable source of proteins, fibres, minerals and bioactive compounds, with recognised health benefits. Pears, quinces and beetroot are fruits and vegetables with high nutritional value, particularly due to their vitamin C content, phenolic compounds and natural pigments. Combining chia seeds with jam from these ingredients can result in an innovative dessert with enhanced nutritional and sensory properties.



Chia seeds (*Salvia hispanica*)



Quince



Pear



Beetroot

• Material and method

1. Technological process



Chia seeds hydration (in plant-based milk) → Jam production (pear, quince and beetroot) → Product assembly

2. Analytical methods

- Moisture content (drying method)
- Vitamin C content (2,6-dichlorophenol-indophenol method)
- Ash content (muffle furnace)
- Titratable acidity (direct titration)

3. Sensory evaluation

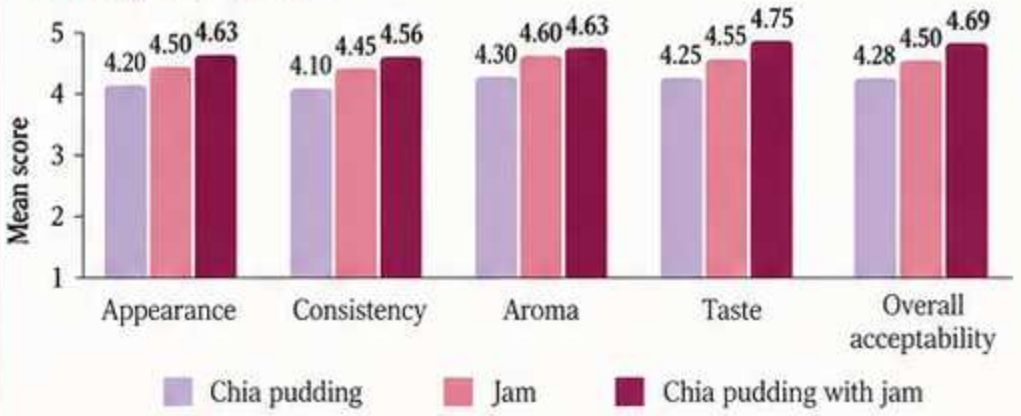
16 panelists
Five-point hedonic scale

- Appearance
- Consistency
- Aroma
- Taste
- Overall acceptability

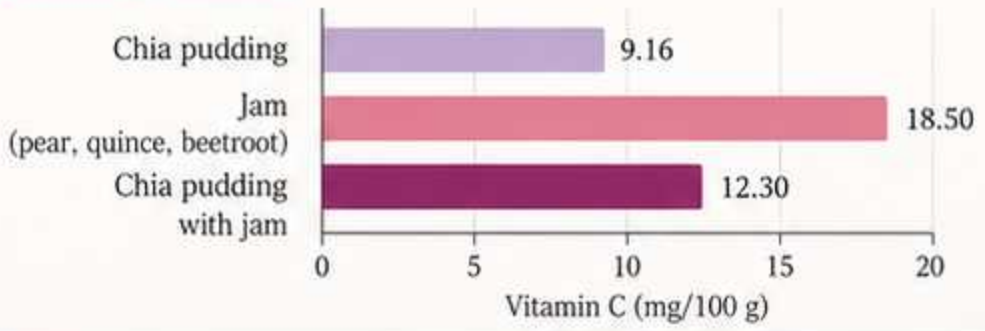


• Results and discussions

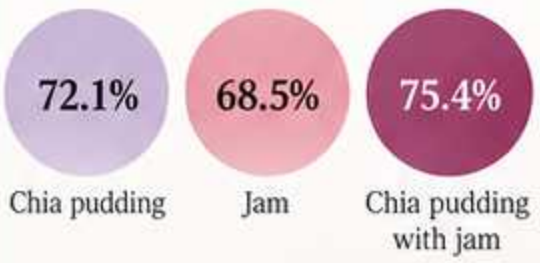
Sensory evaluation



Vitamin C content



Moisture content



Estimated nutritional value (chia pudding with jam)

Parameter	Value (per 100 g)
Energy	≈ 142 kcal
Proteins	3.8 g
Lipids	5.2 g
Carbohydrates	19.6 g
Fibre	6.1 g

• Conclusions

- The chia seed pudding with pear, quince and beetroot jam showed high sensory acceptability, with a mean score of 4.75 for taste and 4.69 for overall acceptability.
- The product contained 12.3 mg/100 g of vitamin C and 75.4% moisture.
- Combining chia seeds with fruit and vegetable jam represents a promising approach for the development of innovative and nutritious dessert products.