IV. CONCLUSION

Mediterranean and aromatic plants are used for herbal tea production by different traditional methods for centuries. However, inappropriate infusion or decoction methods decrease their health promoting effects. Based on this idea, production of an alternative standard beverage from this herb was prepared to improve the product quality and health-related components. As a result, high phenolic content and antioxidative activity were found and the beverage was also preferred organoleptically. This new beverage can also be produced in different forms with addition of diverse kinds of ingredients. Thus it raises beverages availability for procurement of a patent and provides originality of this research.

REFERENCES


Sensen SUNA (Ms C-Food engineers) is a Research Assistant of Food Engineering Department in Uludag University (TURKEY). She got her B.Sc in Food Engineering in Agriculture Faculty, Sichuan University and MS Sc in (2009) in the field of fruit and vegetable processing technology at Food Engineering Department of Agriculture Faculty, Uludag University. New Sensen SUNA is a PhD student and her main focus is on fruit and vegetable processing technology, antioxidative activity and phenolics of foods.

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### Abstract

**Motivation:** Plate waste has been an issue of concern at schools due to nutritional, economic, environmental and social impact. Plate waste at school lunch may be affected by several situational factors, namely presence of caregivers during meal period, time available for lunch, the noise level in the cafeteria, variation of children’s appetite and energetic needs, dissatisfaction between meals served and children’s preferences, scheduling constraints that interfere with meal consumption or result in meals being served when children are less hungry. Problem statement: To evaluate situational factors affecting plate waste at school lunch in primary schools.

**Approach:** Plate waste of soup and main dish at school lunch was evaluated for all fourth-grade children aged 9 to 10 years old, attending to 20 primary schools at a Portuguese Municipality. Weighting of individual meals and leftovers was performed. Plate waste (%) was calculated by the ratios between food discarded and food served to the children. Information about potential factors influencing plate waste at school lunch was collected, including time spent during lunch, recess schedules, presence of teachers and other caregivers at school cafeteria, number of children at emission during meal period, meal time existence of a school strategy to encourage consumption. Results: Plate waste was significantly affected by meal starting time. Children having lunch 20 minutes after ending classes had lower plate waste of soup (p=0.002) and main dish (p<0.001) than children having lunch immediately after the end of classes and children having lunch later. It was found that a higher number of students at school cafeteria also determined high plate waste for soup (p=0.170; p=0.001) and main dish (p=0.175; p=0.001). Plate waste of the main dish was higher for children who spent more time at school cafeteria than for children who finished lunch faster (p=0.153; p=0.001). A significant influence of teachers’ presence at school cafeteria was not observed. Additionally, a higher number of caregivers in cafeteria determined higher waste values for soup (r=0.113; p=0.017) and main dish(r= 0.158; p=0.001). A higher plate waste for soup (p<0.001) and main dish (p<0.001) was observed at schools where children can leave the classroom whenever they want, comparing to schools where in mandatory for children to stay at the cafeteria during meal period. No differences were found for plate waste between children having recess before lunch and others having recess after lunch period. Conclusions: High values of plate waste were observed when children were allowed to leave the cafeteria during the meal time, or when children were not requested to stay at the cafeteria during meal period.

**Keywords:** Children, determinants, plate waste, schools.

Liz Martins M., Cunha L. M., Rodrigues S., and Rocha A. are all with the Faculty of Food Science and Nutrition, University of Porto, Portugal, and also with the INCTE, University of Porto, Portugal.

Cunha L. M. is also with the DGIST, Faculty of Sciences, University of Porto, Portugal, and also with the INCTE, University of Porto, Portugal.

Rodrigues S. is also with the Faculty of Food Science and Nutrition, University of Porto, Portugal, and also with the INCTE, University of Porto, Portugal.

Rocha A. is also with the Faculty of Food Science and Nutrition, University of Porto, Portugal, and also with the INCTE, University of Porto, Portugal.

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