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# **Evaluating the Overall Acceptability, Nutrient Composition, and Costs of a Traditional Tator Tot Recipe Prepared with Selected Vegetables and Cooked Using An Air Fryer**

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Potatoes are the most popular vegetable consumed by Americans and the USDA reports that the form of the spud that is most commonly consumed is the French fries (PBH, 2015; Nestle, 2017). So, tator tots which are similar to French fries are a favorite side-item for many. Parents especially enjoy them because most children will eat them, they are easy to prepare, and can be eaten with fingers. Unfortunately, when they are purchased frozen and fried again, the caloric content increases. a typical serving of baked tator tots (9 tots) has 160 kcalories, 8 grams fats, and 2 grams fiber (My Food Diary, 2019 Most people do not realize these products high in calories and fat because food manufacturers flash-fry them before freezing. Even when prepared from scratch and fried at home, the fat and calorie content remains high. Marrying potatoes with vegetables that are high in dietary fiber and vitamin A and vitamin C could be a way to increase vegetable consumption in children. Furthermore, cooking these products using an air fryer to mimic the texture of a traditional fried product could be a viable option for enhancing the nutrient density of a familiar food (Arias,2019). Therefore, the purpose of this research study was threefold: 1). to evaluate a taste panelists overall acceptability of tator tots prepared with carrots, zucchini, and cauliflower and cooked with an air fryer, 2). to compare the nutritional composition of the tator tot recipe variations with the control tator tot recipe, and 3). to compare the costs of the recipe variations with costs of the control recipe. The researchers prepared the recipes following the control recipe procedures for each recipe variation. Three laboratory experiences were conducted using a taste-test panel. For each laboratory experiment, research members completed the same task for preparing the recipes to control for errors that would influence outcomes of the study. The panelists used a scorecard to assess selected sensory qualities that included color, texture, flavor and overall acceptability of the four samples presented for each lab. Prior to each taste-testing, the researchers prepared a plate divided into four quadrants. A 1.5” X 1.5” sample was prepared by using a leveled tablespoon measure to scoop each variation. Each sample was rolled to form a uniform shape that resembled a traditional tator tot. The control tator tot recipe was deep-fat fried, but the recipe variations were cooked using an air fryer. Each sample was identified by a random number that was indicative of a specific recipe variation. Panelists used a scorecard for each sample using a scale ranging from one to four with one representing bland/soggy/pale/would not eat again and four representing balance between salty with light sweetness/crunchy/uniform golden brown/would definitely eat again. Each recipe was adjusted according to the ratings of the samples and any comments that panelists may have communicated to the researchers using the scorecards. The final recipe of each variation was nutritionally analyzed using [www.happyforks.com](http://www.happyforks.com) and the costs of each recipe was determined using [grocery sales receipts](http://grocerysalesreceipts.com) and [CookKeepBook.com](http://CookKeepBook.com). Overall, the taste panelists preferred the control tator tot recipe giving it an overall acceptability rating of a 4. The panelist scored recipe variation prepared with zucchini and cauliflower with an overall acceptability of 3.25 followed. The least favorite

of the three recipe variations was the one prepared with carrots, receiving an overall acceptability rating of 2.25. The tots prepared with zucchini, cauliflower, and carrots per serving had more vitamin A, vitamin C, and dietary fiber than the control; they were also less in total calories, sodium and saturated fat. The costs of each recipe varied across all recipes with the control being the least expensive to prepare with a total costs of \$1.35 and the cauliflower being the most expensive with a total costs of \$6.16 and the zucchini and carrot variations costing \$3.25 and \$1.52, respectively. The limitations of this study were the limited time frame available to conduct the study and the limited access to panelists who were unfamiliar with this study. On the other hand, the strength of the study were access to the tools necessary to execute the study and availability of sufficient quantities of the ingredients needed to conduct each laboratory experiment. This study indicates that nutrient dense vegetables are a viable option for enhancing the nutritive qualities of foods typically considered unhealthy. Additional research is necessary to determine consumer acceptability of vegetables incorporated into familiar foods that are a standard component of the Western Diet and find ways to enhance the taste profile of foods prepared with vegetables.