

Taste Analysis in Sliced Sandwich Systems

Introduction

The sandwich is one of the most versatile food items known. From eloquent meals to on-the-go snacks, it can be adapted to suit nearly every culinary situation. Since its discovery in the 1st century B.C.E., culinary scientists have made numerous advances in preparation and enjoyment techniques (Zingerman 1982, Quizno et al. 1991). The current focus of our research is committed to continuing this well-established trend of discovery. [...]

Our previous studies have shown that variations in topping selection and application are important in the development process (Wozniak 1998). The model proposed in this paper paved the way for modern thinking on sandwich production. In our pursuit to create the most delectable sandwich, we have taken these discoveries a step further and developed a novel system for the achievement of optimal taste to enjoyment (TE) ratio*. Utilizing techniques derived from the growing field of sandwich slicing, we have shown that, in fact, slicing plays an important role in both the development of taste and enjoyment.

Methods

Sandwich slicing

Slicing was conducted using a modified version of the Cutco protocol (Cutco 2005). The addition of a laser-guided De Walt table saw was used to ensure accurate cutting angles.

[...]

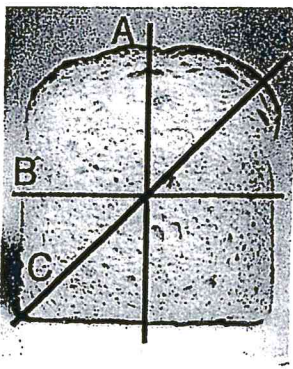
Statistical Analysis

The statistical software suite SandSoft was utilized to calculate heartiness enjoyment matrices (HAM) and TE ratio. Analysis was conducted under the guidance of Dr. Amer.

Results

In order to investigate the role of slicing in sandwich taste, we conducted an analysis on the different varieties of slicing currently available: diagonal, horizontal, and vertical. Each participant in a randomly selected group of varying cultural backgrounds (n = 10) was given an un-sliced peanut butter and jelly sandwich served on white bread along with vertical, horizontal, and diagonal slices of the same sandwich. A short survey was given asking each participant to rate flavour, heartiness, enjoyment and presentation with one of 20 ratings ranging from intolerable to greatest sandwich ever made. Our results show that the slices rate higher in HAM and TE ratio when compared with the un-sliced, which matches the data of previous studies (Cutco 2005). Additionally, diagonal slices consistently netted a higher rating than both horizontal and vertical slices in all categories. To confirm these findings and to make sure these results were not topping or bread dependent, we recreated the same experiment twice using both pastrami on rye and ham and Swiss on sourdough. These both yielded similar results. [...]

* A standard measurement in the field.



The slice of bread used was cut three ways. (a) A vertical slice running at a 90° angle from the top of the slice to the bottom. (b) A horizontal slice running from side to side and parallel with the bottom of the slice. (c) A diagonal slice running from the bottom left corner of the slice to the upper right corner (~45° above bottom of slice). Note: a diagonal slice running from the bottom right to the upper left was also used and produced the same results (data not shown).

Table 1

Category	Unliced	Vertical	Horizontal	Diagonal
Flavour	11.2	15.6	15.1	18.9
Heartiness	9.7	13.5	14.7	17.4
Enjoyment	6.5	16.8	13.3	19.14
Presentation	7.8	14.9	14.5	19.6
Average Score	8.8	15.2	14.4	

Averaged Survey Results

Discussion

[...]

Our findings indicate that diagonally sliced sandwiches taste better as indicated by HAM and TE ratio. As a result of this study and our previous research we propose that diagonal slicing is one of the keys to a perfect tasting sandwich. When combined with proper toppings and preparation, diagonal slicing can improve any sandwich. We suggest that diagonally sliced sandwiches should be accepted as the universal standard for producing the world's best sandwiches.