Flavor Profile of French Type Sald Dressings

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Abstract

Flavor profiles on regular and low-calorie French type salad dressings were carried out in the two different temperatures (5°C and 25°C). Data collected through consensus discussion. Panelists found less oil flavor and after-taste in the low-calorie dressing, which was to be expected, since water has been substituted for oil to reduce the calories. The two salad dressing had a moderate aroma and flavor of cider vinegar, with a slight taste of distilled vinegar. It was balanced by a tomato flavor consisting of tomato paste, tomato sauce, and tomato juice. There were slight aroma and flavor of spices, including onion and garlic, and a moderate amount of oil in the regular dressing. The overall sweet and sour flavor impression were in the low-moderate range, and were well balanced. The amplitude of the low calorie dressing was moderate, being slightly higher than that of the regular dressing. Temperature effects seemed to influence more one the low-calorie samples than regular samples.

요약

프렌치 타입의 저열량 샐러드 드레싱과 보통 샐러드 드레싱의 향미 프로필을 두가지의 다른온도(실시 5도 및 25도)에서 수행하였다. 닭새와 향미 프로필에 대하여 각각 식초의; 사이다형 혹은 증류형, 토마토의; 페이스트형, 소오스형, 혹은 유스형, 항신료; 마늘의, 신선한 양파, 건조된 양파, 셀러리, 파프리카, 소금의, 기름질, 전체적인 단맛, 전체적인 신맛 등의 특성과 설정되었다. 허들이는 물로 대체된 저열량 식료는 기본이 되었던 데로 젤러리시료보다 기름질의 향미특성이 높다고 평가되었다. 전체적인 조화도는 저열량 드레싱이 허들리 드레싱보다 더 높았다. 저열량드레싱은 허들리 드레싱보다 더 훨씬의 영향을 받았기 때문에 나타났다.

I. Introduction

With increasing preferences in healthful foods among consumers, low calorie food diets seem to have more attentions than before. In response to those current requests, many food service centers come to use low calorie type salad dressings on their salad bars. Flavor profile of salad dressings could be used in the development of a diet dressing of the same type.

The flavor profile method provides a record of a product’s aroma and flavor component similarities and differences which can be pinpointed by direct comparison of records\(^1\). Sensory analysis of both aroma by smelling and flavor by mouth results in a chronological tabulation of tastes, feeling sensations, and odors taken into the mouth and prepared for swallowing\(^2\).

The objective of this study was to profile and compare the aroma and flavor of the regular French type salad dressings with a low calorie dressing of the same type at room temperatures (25°C) and at refrigerated temperatures (4°C). Over-all impression of the aroma and flavor, as well as intensity and order of appearance of individual character or flavor notes are reported.

II. Materials and Methods

1. Panel training and ballot development

The panelists consisted of five female graduate students who majored in Food Science aging from 23 to 35 years old. All panelists had receive prior experiences in descriptive methods of sensory analysis through their coursework. Specific training for flavor profiling before initiating the salad dressing study included the reading assignments on articles related to sensory flavor profile analysis (FPA) and formal lectures on the basic principles of sensory FPA.
All the panel members could communicate their flavor sensations verbally and used the same terms which presupposes common experience of expressing their sensations\(^5\).

In the intensive orientation and training session, the panelists worked with an unstructured ballot to identify and list in order of appearance the perceptible flavor and aroma factors they found in the sample. Techniques were standardized to note the chronological order in which character notes appeared. In the followed discussion, techniques for examining the product were suggested. Although the dressing is ordinarily recommended to serve at a refrigerated temperature, it was decided to examine the dressing at room temperature, since the warmer temperatures increased the intensity of the aroma and flavor, making identification of flavor factors more accurate. A list of perceptible factors was identified which became the major notes found on the ballot. The panel members came to a consensus agreement on the major factors after working with references and practicing several brands of the same type dressings. Available references were decided including:

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**Fig. 1. Structured Scales** for French-type Salad Dressing Flavor Profile.

*A ten point attribute scaling ballot. Intensities measured as follows: 0 = not perceptible, 1 = threshold, 2-4 = slight, 5-7 = moderate, 8-10 = strong.*