

## Sensory Characteristics of White Chocolate Enriched with Encapsulated Raspberry Juice

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**Abstract :** Chocolate is a food that activates pleasure centers in the human brain. In comparison to black and milk chocolate, white chocolate does not contain fat-free cocoa solids and thus lacks bioactive components. The aim of this study was to examine the sensory characteristics of enriched white chocolate with the addition of 10% of raspberry juice encapsulated in maltodextrins (denoted as encapsulate). Chocolate is primarily intended for enjoyment, and therefore, the sensory expectation is a critical factor for consumers when selecting a new type of chocolate. Consumer acceptance of chocolate depends primarily on the appearance and taste, but also very much on the mouthfeel, which mainly depends on the particle size of chocolate. Chocolate samples were evaluated by a panel of 8 trained panelists, food technologists, trained according to ISO 8586 (2012). Panelists developed the list of attributes to be used in this study: intensity of red color (light to dark); glow on the surface (mat to shiny); texture on snap (appearance of cavities or holes on the snap surface that are seen - even to gritty); hardness (hardness felt during the first bite of chocolate sample in half by incisors - soft to hard); melting (the time needed to convert solid chocolate into a liquid state - slowly to quickly); smoothness (perception of evenness of chocolate during melting - very even to very granular); fruitiness (impression of fruity taste - light fruity notes to distinct fruity notes); sweetness (organoleptic characteristic of pure substance or mixture giving sweet taste - lightly sweet to very sweet). The chocolate evaluation was carried out 24 h after sample preparation in the sensory laboratory, in partitioned booths, which were illuminated with fluorescent lights (ISO 8589, 2007). Samples were served in white plastic plates labeled with three-digit codes from a random number table. Panelist scored the perceived intensity of each attribute using a 7-point scale (1 = the least intensity and 7 = the most intensity) (ISO 4121, 2002). The addition of 10% of encapsulate had a big influence on chocolate color, where enriched chocolate got a nice reddish color. At the same time, the enriched chocolate sample had less intensity of gloss on the surface. The panelists noticed that addition of encapsulate reduced the time needed to convert solid chocolate into a liquid state, increasing its hardness. The addition of encapsulate had a significant impact on chocolate flavor. It reduced the sweetness of white chocolate and contributed to the fruity raspberry flavor.

**Keywords :** white chocolate, encapsulated raspberry juice, color, sensory characteristics

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