

Mariia IANCHYK¹, Olexandra NIEMIRICH¹, Olena IANCHYK², Oksana DRANENKO²

marfysha_777@mail.ru, avnemirich@mail.ru

¹National University of Food Technologies, Kyiv

²Vinnitsia Trade and Economic Institute of Kyiv National University of Trade and Economic, Vinnitsia

UKRAINE

DEFINITION INDICATORS OF QUALITY OF THE CONFECTIONERY SEMI-FINISHED PRODUCT WITH POWDER FROM CARROT

The technology of receiving finishing semi-finished products provides use of a substance that forms the structure and thickeners. In this regard functional and technological properties of the powder from carrots received by cold spray drying (CSD) were studied.

It is obvious that introduction of powder leads to emergence in a ready-made product of a peculiar color, aroma and taste. Therefore, the special attention needs to be paid to research of organoleptic properties of powder from carrots.

Powder from carrots has the saturated orange color, homogeneous throughout the mass, a pleasant smell with flavor of carrots, without visible inclusions and impurity. Humidity powder is not more than 5%; water absorption coefficient — 2.325 kg/kg; water connecting ability — 6.15%; emulsifying capacity — 1.94 ml/g; ability to hold oil — 0.805 ml/g.

At introduction of powders to confectionery masses it is expedient to use powders with a size of particles up to 15 micron and content of this fraction not less than 75...80%. Justification of these parameters is that particles with sizes more than 20... 25 microns are felt organoleptic. Therefore we investigated by a microscopic method dispersion of powder from carrots. In this powder most (namely 82%) represented the fraction of particles to 15 microns.

Considering the above-stated data, this powder was used as a substance that forms the structure for production of a confectionery semi-finished product which includes fondant mass, butter, surfactants and powder from carrots. It was investigated physical and chemical indicators of the received semi-finished product.

This semi-finished product has a glossy, but not sticky surface; homogeneous plastic consistence; orange color; pleasant flavor and barely perceptible odor of carrots. Moisture is 11,5%. The content of reducing substances is 4,2%. The size of crystals of the main fraction is 10—15 microns.

Apparently from the presented data, at addition of powder from carrots, physical and chemical indicators of quality of a confectionery semi-finished product are in admissible limits of values.

Thus, it is shown that powder from carrots cold spray drying provides a confectionery semi-finished product with attractive organoleptic properties and corresponding to physical and chemical indicators of quality.

KEY WORDS: *plant powders, confectionery semi-finished product, dispersion, substance that forms the structure*

Oksana PETRUSHA, Nadia USATYUK

petrushaoo@ukr.net, svm58@ukr.net

National University of Food Technologies, Kyiv

UKRAINE

ASSESSMENT OF COLOR TEA BY INNOVATIVE METHOD

Tea is a very popular drink in most country. For people who prefer this drink it's gives them invigorates, quenches thirst, improves complexion, removes the sleepiness, slow down aging. In addition tea source is useful elements and substances that strengthens the nervous system, reduces blood cholesterol level and it is effective in preventing cardiovascular diseases.

The quality of tea depends of origin, kind, size, leaf tea, appearance, flavor, aroma and largely on the color. Because color is an important attribute in determining the quality of tea.

Today the main methods of determining the color of tea is sensory, characterized by simplicity of performance, availability, speed indicators and cheapness. However, determining tea quality only on the basis of sensor performance is not sufficient because method is subjective and not accurate and has low reproducibility determination results.

A new way to determine the color of tea is to use the computer colorimetry, which is based on using digital imaging tea infusion, followed by decoding each pixel on the RGB coordinates. Through the use of application of widely used computer programs that allow you to analyze brightness and saturation of the color of the image, we can assess the quality of the tea.

The color of tea leaves due to the content of pigments such as chlorophyll, carotene and ksantofil. Optical properties of pigments associated with their chemical structure.

These compounds absorb light in the visible region of the spectrum and give the proper color of tea. Green and blue components of different tea infusions have a different amounts of these components. Rich brown color infusion tea has a lower value of green component. The blue component for green and white tea has a smaller range of variation of dry matter content.

According to the research method of computer colorimetry it is promising for food control.

KEY WORDS: *tea, color components, digital image*