

## 8<sup>th</sup> Central European Congress on Food

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НАЦІОНАЛЬНА АСОЦІАЦІЯ ВИРОБНИКІВ ДИТЯЧОГО ХАРЧУВАННЯ, МОЛОЧНОКОНСЕРВНОЇ ТА СОКОВОЇ ПРОДУКЦІЇ "УКРКОНСЕРВМОЛОКО"



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- Food Technologies

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### 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 adry matter content.

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

KEY WORDS: tea, color components, digital image