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# ABSTRACT BOOK

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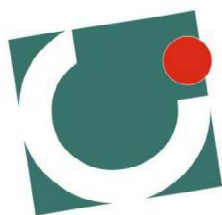
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## INNOVATIVE CHLEBÍČKY - TRADITIONAL PRODUCT FROM CZECH REPUBLIC

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### Abstract

Chlebíček is very well known in Czech Republic. It is a frequent part of Birthday, Wedding, or New Year celebration menus. Chlebíček is an open-sandwich, typically constituted by a slice of bread from a specific type called “veka” with potato salad on top like a spread, Edam or Gouda cheese, ham, pickles, a slice of hard-boiled egg and colourful pepper. In 1916 Jan Paukert founded the famous delicatessen in Prague that serves delicious treats including the famous Czech “Chlebíčky” sandwiches. Typical chlebíčky (Figure 1) was created at the instigation of Paukert's family friend painter Jan Rytíř Skramlík, who required "something for two, three bites". The storage temperature is determined by the manufacturer but should not be higher than 10 °C. Chlebíčky are delicacies and therefore they are risky food subjects which can be subject to rapid spoilage.



Figure 1. Czech “Chlebíčky” sandwiches

Production of low-fat cheeses is a very important issue today because many people care about a healthy lifestyle and, although classic cheeses contain a high percentage of protein they traditionally are also rich in fat. However, cheeses with reduced fat content are available while preserving the protein content. These cheeses must also be well organoleptically tolerable to the consumer (Renner, 1993).

The classic cream cheese has a soft, rich and slightly sour taste and creamy consistency. It is made from skimmed milk and cream. According to the traditional process, the cream cheese mixture is pasteurized, homogenized, inoculated with milk culture, and maintained at 23 °C until the pH reaches 4.6. It is further heated to a temperature of up to 63 °C and other ingredients are added like salt, stabilizers and emulsifiers. Its texture should be spread even while staying in the fridge. It is used as a spreader or added to bakery products, cakes and other foods (Sainani et al., 2004).

Cream cheese should contain a maximum of 55 % moisture and at least 33 % fat according to the FDA. Current trends focus on low-fat products because consumers see the link between lifestyle and diseases, especially hypercholesterolaemia (Ningtyas et al., 2017).

Commercial mayonnaises have high oil content, according to FDA regulation a minimum of 65 % to 80 %, and should not be taken by people who have high cholesterol and weight problems (Featherstone, 2016). Even though mayonnaise has been around for over 100 years and is one of the most popular sauces, current trends are not too sympathetic to it because it contains a lot of fat and salt, which contributes to obesity and other health problems (Morley, 2016).

The aim of this work was to prepare innovative Chlebíčky sandwiches, changing the spreads and bread. Since potato salad with mayonnaise is very fat and difficult to digest, it was decided to replace it with cream cheese, which contains proteins and low fat. Veka is replaced with local bread, because veka is only available in Czech Republic.

The preparation of the Chlebíčky sandwiches included cooking the hard-boiled eggs and cut into slices. The cooking time should be 10 minutes after the water starts to boil. Slice the bread and cover with cream cheese spreading evenly. Cut the ham slice in half and make it a pointed shape. Place it on top of spread on the left side. A slice of Gouda cheese cut diagonal and fold the cheese lengthwise in half and place one half on the right side. Take one pickle and cut it in half and place on top. Cut the red pepper into longitudinal strips and place a small piece on top next to the pickle over the cheese. Place one slice of cooked egg in the remaining free space (Figure 2).



Figure 2. Alternative Chlebíčky sandwiches

As a result, it was prepared a pleasant product, very similar to the original, but consisting of a healthier version with cream cheese instead of potato salad full of mayonnaise. Therefore, alternatively to the high fat content mayonnaise in potato salad, it was obtained a similar product with low fat and high protein content. The result is a healthier alternative to a classic product. The original bread veka has been replaced but taste was similar to the original veka, although it was a little harder and not so fluffy and soft like veka.

As future suggestions different types of bread could be tested, including those made with whole grain flour, and nutritional as well as sensory evaluations should be undertaken.

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