

Effect of Antioxidants Addition in Combination with Milk Re Pasteurization on the Physical, Chemical and Sensory Properties of Condensed Yoghurt

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Abstract : Our main goal in this project is to study the causes and finding solutions for both the hydrolytic and the oxidative rancidity that can be produced during condensed yoghurt production. The re pasteurization of the pasteurized milk and the addition of different types of antioxidants (ascorbic acid and propyl gallate) were used to achieve this goal. Chemical, physical, microbial and sensory tests were done to evaluate the product. It was found that there were significant differences between the different treatments and the control regarding the peroxide value. This means that the addition of both types of antioxidants have a positive effect in decreasing the rancidity value. However, it was found that there were some samples have hydrolytic rancidity flavour without any type of oxidative rancidity (low peroxide value). To overcome this problem the re pasteurization step was used to destroy all the vegetative form of microbes. It was found that this treatment was very useful in controlling the rancidity flavour according to the sensory evaluation of the condensed yoghurt products for several batches. The best condensed yoghurt which contains 0.25% ascorbic acid exhibited the highest sensory properties values. Also, it has the ability in lowering the oxidative rancidity in the combination with the re pasteurization step of the pasteurized milk. This suggests that a higher quality and stable condensed yoghurt can be obtained upon using this combination. These results may help producers in selecting the best treatment methods to overcome the rancidity flavor in this type of condensed yoghurt.

Keywords : antioxidants, condensed yoghurt, repasturization, condensed milk

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