



كلية الزراعة
قسم الميكروبيولوجيا الزراعية

Seoudi, O.A. د. أسامة عبد التواب سعودي
ABSTRACT



جامعة الفيوم

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| Gamal-Eldin, H. M., Abd El-Salam, B., A., Seoudi, O.A. , Mahmoud, H.A. and Mohamed, A.G. (2017). Inhibition of processed cheese-late gas Using <i>Candida pelliculosa</i> yeast. Int. J. Dairy Sci., 12(5): 197- 203. | البحث الرابع |
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| Title | Inhibition of processed cheese-late gas Using <i>Candida pelliculosa</i> yeast. |
| Participants | Gamal-Eldin, H. M.,¹ Abd El-Salam, B., A., Seoudi, O.A.,¹ Mahmoud, H.A. and Mohamed, A.G. (2017). ¹ Department of Agricultural Microbiology, Faculty of Agriculture, Fayoum University, Egypt ² Department of Dairy Research, Food Technology Research Institute, Agricultural Research Center, Egypt ³ Department of Dairy Science, National Research Center, Dokki, Giza, Egypt |
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ABSTRACT

Yeasts have potential antimicrobial activities against the growth of putrefaction bacteria. The late gas defect is a major cause of spoilage in processed cheese. It results in the production of gas, off-odours and the liquefaction of the cheese. Some clostridial species are considered cause of late gas defect in cheese. So, processed cheese-late gas inhibition using dried supernatant of *Candida pelliculosa* yeast compared with nisin was studied. Methodology: Five processed cheese treatments were prepared. The treatments were A (control 1) fortified with clostridial spores only, B (control 2) fortified with clostridial spores and nisin (1000 IU g⁻¹), while, C, D and E treatments fortified with clostridial spores and 1, 3 and 5 mg of dried supernatant of *Candida pelliculosa* yeast DSCPY per gram, respectively. The resulting processed cheese treatments were storage at 30⁰C for 3 months. The chemical, physical and microbiological analyses of the resultant cheeses were performed every month of storage. Results: The treatments of A (control 1), C (1 mg DSCPY g⁻¹ cheese) and D (3 mg DSCPY g⁻¹ cheese) spoiled by producing high quantity of gas from the 1st month of the storage period and cheese glass jars were opened. Hence, the chemical, physical and microbiological analyses of these treatments weren't performed.

يتبع التالي..



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تابع البحث الرابع...

Inhibition of processed cheese-late gas Using *Candida pelliculosa* yeast.

The chemical composition of fresh processed cheese treatments and those of with 5 mg DSCPY g⁻¹ or nisin during storage period was not significantly affected. Changing physical properties (penetrometer reading, oil separation and melting index) of studied processed cheese treatments did not happen at zero time.

The penetrometer reading of E treatment (5 mg DSO CY g⁻¹) was higher than those of with nisin B (control 2) during storage period. The oil separation index increased but melting index and penetrometer reading decreased gradually during storage period in treatment E (5 mg DSCP Y g⁻¹) or those of with nisin. Also, color properties of studied cheese treatments were determined. The microbiological results showed that the most effective concentrate of DSCP Y against clostridial spores was 5 mg g⁻¹. Conclusion: It be concluded that the addition of 5 mg g⁻¹ of DSCP Y during processed cheese spread manufacture prevented of late-blowing in cheese.