

## عنوان مقاله:

Tuf-gene based PCR detection and selective plate count quantification of Bifidobacterium animalis subsp. lactis BB-12 in Iranian commercial probiotic yoghurts

## محل انتشار:

اولین کنگره بین المللی و بیست و چهارمین کنگره ملی علوم و صنایع غذایی ایران (سال: 1395)

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## نویسندگان:

Salman Odooli - *Ph.D student in Microbiology Parmaceutical Sciences Research Center, School of Pharmacy, Shiraz University of Medical Sciences, Shiraz Iran*

Mohammad Kargar - *Associate professor in Microbiology Department of Microbiology, Jahrom Branch, Islamic Azad University, Jahrom, Iran*

Younes Ghasemi - *Professor in Pharmaceutical Biotechnology Parmaceutical Sciences Research Center, School of Pharmacy, Shiraz University of Medical Sciences, Shiraz Iran*

## خلاصه مقاله:

Due to the increasing use of Bifidobacteria in dairy probiotic products, it is essential to establish a rapid, specific and sensitive method for the qualitative assay of the Bifidobacteria in commercial products. In this study, a new tuf gene-based primer set was designed for the polymerase chain reaction (PCR) detection of Bifidobacterium animalis subsp. lactis BB-12 in commercial probiotic yoghurts. The specificity of designed primer set was evaluated by operation PCR reaction with DNAs from common probiotic Bifidobacteria and Lactobacilli strains presented in commercial probiotic yoghurts. Finally, strain BB-12 was detected and enumerated using tuf gene-based PCR and selective plate count, during shelf life and after expiry date of Iranian commercial probiotic yoghurts. When Bifidobacterium animalis subsp. lactis BB-12 was assayed with the designed tuf gene-based primer set, PCR product with expected size was generated, but other Bifidobacteria and Lactobacilli reference strains, all generated negative results. The results of selective plate count indicated that the counts of Bifidobacterium animalis subsp. lactis BB-12 had significant decrease during shelf-life. However, these counts didn't fell below CODEX standard (106 CFU/mL), until expiry date of products. Bifidobacterium animalis subsp. lactis BB-12 was also detectable using developed tuf-gene based PCR assay, either during shelf life or even after expiry date of commercial probiotic yoghurts. In conclusion the tuf-gene based PCR reaction developed here could serve as a powerful molecular procedure for detection of B. animalis subsp. lactis BB-12 in commercial probiotic yoghurts

## کلمات کلیدی:

Probiotic yoghurt, Bifidobacterium BB-12, Tuf gene, PCR, Shelf-life, Quantification

## لینک ثابت مقاله در پایگاه سیویلیکا:

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