J Bacteriol Parasitol 2017, 8:6(Suppl)
DOI: 10.4172/2155-9597-C1-041

Trimethoprim and Rifampicin a new selected culture medium with for the growth of *Lactococcus lactis* species

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Lactic acid bacteria are a very heterogeneous group phenotypically. This group is characterized by the type of common criteria Gram positive, absence of catalase producing mainly lactic acid. The genus *Lactococcus* recently created includes non-haemolytic streptococci and homofermentative. The evaluation of exogenous lactococci dairy samples is frequently required for the evaluation of the milk colonization by *Lactococci*. In this study, different culture media, Elliker and M17-trimethoprim and M17 and Elliker rifampicin, have been tested for *Lactococcus* strains isolated from raw goat's milk from the region of Oran. A selective medium designated Elliker-Trimethoprim medium ETM was developed for the culture of exogenous Lactococcus sp. In quantitative assays, ETM showed sensitivity higher than M17 media. This medium allowed the selective growth of Lactococcus, the following species: *Lactococcus lactis* subsp. *lactis*, *Lactococcus lactis* subsp. *cremoris*, *Lactococcus lactis* subsp. *lactis biovar. diacetylactis, Lactococcus plantarum* and *Lactococcus raffinolactis*. This culture medium is a new microbiological tool that solved a problem of isolation of Lactococcus species which are much researched for food industry. After several tests, and comparative study, the Elliker-trimethoprim was chosen to follow the specific isolation and growth of Lactococcus species. The presence of Trimethoprim made ETM inhibitory to most milk bacteria, including endogenous lactic acid bacteria, whereas *Lactococcus lactis* strains grew well. Identification morphological phenotype physiological, immunological and biochemical tests, confirmed the 40 isolates belonging to the genus Lactococcus. 17 isolate (42.5%) belonging to the subspecies *Lactococcus lactis* subsp. cremoris were revealed on Elliker-trimethoprim media. The results showed that ETM is suitable for detection and enumeration of *Lactococcus lactis* species in curd milk samples.

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