



# 12th International Colloquium on Paratuberculosis

### Abstract P-05.10

## VIABLE MYCOBACTERIUM AVIUM SUBSP. PARATUBERCULOSIS IN RETAIL ARTISANAL COALHO CHEESE FROM NORTHEASTERN BRAZIL

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#### Abstract text:

The artisanal Coalho cheese is the most consumed and produced dairy product in Northeastern region in Brazil, it has great cultural importance and represents the main source of income for many smallholder. Considering that *Mycobacterium avium* subsp. *paratuberculosis* (MAP) has already been detected from many types of cheese in different countries, the aim of this study was report the detection of MAP in raw retail Coalho cheese in Brazil by molecular test and microbiological culture. During November 2011 to January 2012 were randomly collected 30 samples of artisanal Coalho cheese in formal and informal trade in Parnaíba city, Piauí State. A total of 30 g of each sample was placed in sterile bags and 125 mL of 1% NaCl preheated were added into the bags and mixed at stomacher blender for 2 minutes at 260rpm. For culture, 30 mL of the resultant suspension were decontaminated with 10 mL of 0,75% Hexadecyl pyridinium chloride for 5h and 250uL aliquot of the suspension was inoculated onto two Herrold's egg yolk medium (HEYM) with and without Micobactin J. Another 30 mL of the result suspension were used for DNA extraction. The primers BN1 and BN2 that amplifies 626 bp fragment, based on the insertion sequence IS900 were used. MAP-specific DNA was detected by conventional PCR in three of Coalho cheese samples and one of these samples verified the growth in culture. They were submitted to sequencing and were compared with sequences deposited in GenBank and revealed 99% similarity with strain MAP UFV-JJ insertion sequence IS900. The results of our study confirmed the presence of MAP-specific DNA and viable cells in artisanal Coalho cheese from Piauí State, Northeast Brazil and evidence that MAP might remain viable in retail cheeses. This study has important implications since MAP can be adjuvant agent in Crohn's disease, with a potential risk for susceptible people by ingesting dairy products contaminated with viable MAP. This is the first report of viable MAP in cheese in Brazil.

#### Keywords:

viable, cheese, detection