

**TITLE:** DETECTION OF COLONIZATION FACTORS IN *ESCHERICHIA COLI* SAMPLES ISOLATED FROM CALVES IN FEIRA DE SANTANA-BA.

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**ABSTRACT:**

Enterotoxigenic *E. coli* (ETEC) is identified through some virulence factors, especially the presence of adhesion antigens, which allow the bacterium to bind to host cells. This study aimed to identify the fimbria present in *E. coli* samples isolated from calves with diarrhea. Fecal samples of calves between 0 and 3 months of age were collected from different farms in the region of Feira de Santana-BA. Fecal samples were diluted in phosphate buffer pH 7.4 and then spread in MacConkey Agar and incubated for 24 h at 37 °C. Then fermenting and non-lactose fermenting colonies were isolated. Among these, 120 colonies were identified as lactose fermenters. They were inoculated in BHI (Brain-heart infusion) broth for 24 hours at 37 °C for biochemical tests and identification. The colonies grown in BHI were spread in the EPM media, Simions MILi Citrate, and the metabolic activity of the bacteria was verified on the substrates present. The colonies identified as *E. coli* were precultured in TSB medium at 37 °C for 24h and then spread in TSA (trypticase soy agar) and incubated at 37 °C for 24h to obtain confluent growth and extraction of DNA. PCR was performed using specific primers F5, F17, F41 for each of the genes. According to the analysis of the biochemical series for Enterobacteriaceae in the EPM, MILi and Simmons Citrate media, it was possible to confirm the presence of *E. coli* among lactose fermenting colonies. Of the thirty samples analyzed, 80% of the samples were positive for fimbrial adhesins F5 and F17, respectively, and none had the gene encoded for F41. *E. coli* present in feces samples from calves are producers of colonization factors. Therefore, the identification of the associated virulence factors will be important to trace the profile of the samples in the State. And we direct research into the development of vaccines in order to reduce the losses with the deaths and delays in the weight gain of the herds.

**Keywords:** calves, diarrhea, *E. coli*, virulence factors.

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