TITLE: Microbiological Evaluation of the Water of the Rural Family Agroindustries of the Producer Market in Pato Branco

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ABSTRACT: In Rural Family Agroindustries sources of water supply are alternative solutions, such as shallow wells and springs, sources very susceptible to microbiological contamination. The potential of water to transmit diseases can be determined in an indirect way, through the fecal contamination indicator organisms, mainly belonging to the group of coliforms, thus, the monitoring of water quality aims at the consumption of drinking water, based on microbiological, Advising on the need, quality and promotion of intervention measures, being preventive or corrective. In order to follow the microbiological standards of human consumption water from the beneficiation units of producers that market their products in the Producer's Market, samples were collected from alternative water supply solutions between 2012 and 2016. The collection was carried out aseptically, at the water collection point and at the faucet after reconstitution, in a sterilized 100 mL specimen vial, sent to the laboratory. The method of analysis used was the Enzymatic Substrate (StandardMethods 9223), by the technique of the Definite Substrate (DST - Colilet) that simultaneously detects total coliforms and fecal coliforms, where, after incubation at 36 ± 2 ° C for 24h. The results showed that in 2012, of the 27 samples analyzed, 25 (98%) were in disagreement with the potability standards. In 2013, only 11 (45%) of the 11 samples analyzed had satisfactory results in 2014 Of the 46 samples analyzed, only 25 (54%) had satisfactory results. In the year 2015, of the 46 analyzed samples, 24 (52%) had satisfactory results, in 2016 of the 37 analyzed samples 24 (65%) had satisfactory results. The results obtained in the present study indicate that at the beginning of the monitoring the water used in rural properties was a health risk factor. After the actions of sanitary education and corrective measures aiming at the protection of the water sources allied to the techniques of treatment of manure, it was observed the reduction of the risk of occurrence of diseases of water binding. Concluding that the microbiological quality of the water consumed in the evaluated properties evolved during the monitored period.

Keywords: Water for human consumption, Fecal coliforms, Total coliforms, Water quality

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