STUDY ON SISAL (AGAVE SISALANA) FERMENTATIVE POTENTIAL IN PRODUCTION OF FERMENTED ALCOHOLIC DRINKS


Brazil is the largest world producer of sisal (Agave sisalana), a vegetable grown in the semiarid region. Its fiber is used to produce domestic and marine ropes, mats, brooms, crafts and auto components. Similar and taxonomically close it there is there’s the blue agave (Agave tequilana), a native plant from Mexico and cultivated for the production of tequila, a beverage with production of 800 million liters/year. This study evaluated the potential ability to harness the sisal or the residue from the extraction of its fibers to produce a fermented-distilled drink by taking advantage of the productive chain of sugar cane spirit seasonally idle. Bromatological evaluations of juice extracted from the leaves, stem and residue from separation the fibers were carried out. The use of milling sugar cane to extract the juice showed high rates of extraction, from the order of 55 to 79%. Juice extracted from the leaves had a total sugar content between 4.5 and 4.6%, in the stem from 1.0 to 1.1% and residue from fiber between 0.7% and 7.8% and low potential of alcoholic fermentation since most of its part was composed by non-reducing sugars what requires a chemical, enzymatic or physical hydrolysis. The ashes and moisture contents were around 1.3 and 89.7%, respectively. The residue showed high concentration of macro and micro nutrients that justifies its use as fertilizer and as supplement to animal feed. The yearly practice of extraction of the fibers can physiologically inhibit the accumulation of sugars in the sisal.