Yogurt is defined as a product obtained from milk fermentation with protosymbiotic cultures of *Streptococcus salivarius* spp. *thermophilus* and *Lactobacillus delbrueckii* ssp. *bulgaricus*, which not only degrade the lactose in yogurt but also develop desirable sensory characteristics, changing its flavor, texture and aroma. This study aimed to determine the number of viable cells of lactic acid bacteria during the 28 days of refrigerated storage at 4 °C. Four different formulations of yogurt were prepared with different concentrations of cocoa (3% to 4%) and sucrose (7% and 10%). Analyses were performed in triplicate on days 1, 7, 14, 21 and 28 according to the International Organization for Standardization standards. The average count of lactic acid bacteria remained between \(7,13 \times 10^6\) and \(1,9 \times 10^9\) CFU.g\(^{-1}\) for Treatment 1; \(1,03 \times 10^{11}\) and \(5,05 \times 10^9\) CFU g\(^{-1}\) for Treatment 2; \(1,7 \times 10^9\) and \(1,5 \times 10^9\) CFU.g\(^{-1}\) for the Treatment 3 and \(3,7 \times 10^9\) and \(1,26 \times 10^9\) CFU.g\(^{-1}\) for Treatment 4. There was a slight reduction in the count during the storage period, but the number of viable cells of *S. thermophilus* and *L. bulgaricus* attended the values recommended by the Brazilian legislation, which must be at least \(10^7\) CFU g\(^{-1}\) in the final product and throughout the period of validity, which shows that the added ingredients did not affect the cultures, demonstrating in this respect, the availability of producing cocoa mint yogurt.