The research was conducted to verify the effect of inulin and fructooligosaccharides (FOS) - prebiotic fiber - on the mineral and chemical characteristics of ice cream. Three formulations were obtained in which varying levels of fiber, known as T1 (FOS + 1% + 1% 0% linseed inulin), T2 (1% FOS + 1% + 2.5% linseed inulin) and T3 (1% FOS + 1% + 5% linseed inulin). The samples were chemically characterized regarding the content of ether extract, moisture, ash and protein. Mineral composition were determined for the Ca, Na, Mg (macronutrients), Fe and Mo (micronutrients) and analyzed by SAS 0.05. The ether extract content was varied for the samples T1 and T3 showing 32.13 and 20.42% respectively. The humidity was between 55.61, 63.72, 71.87% by detecting differences between samples. Regarding protein levels ranged from 1.18, 0.96, 1.03% and ash 4.81; 6.29, 8.35 did not differ between the formulations. For macronutrients observed that T3 was the one with the highest content of Ca, Mg and Na (10.48, 1.89 and 4.43 g / kg respectively), with no difference between T1 and T2. For the micronutrients, T3 was also presented the highest iron content (269.34 mg / kg) differed from T1. Have Mo statistically significant difference between the three formulations and T3 was the one that received the highest amount (19.28 mg / kg). T3 formulation showed better results in terms of nutritional probably due to the high content of inulin.