The technological options available for the development of probiotic foods, such as microencapsulation, sometimes may prejudice the sensory performance of the product by causing alterations in the flavor and texture. In this study, samples of frozen yogurt added *Bifidobacterium* BB-12 microencapsulated with different concentration of reconstituted skimmed milk and inulin were evaluated regarding sensory acceptability. The microcapsules were produced through the spray drying process and added in frozen yogurts after the ripening step. The frozen yogurts were designated as Control, sample added of free bacteria, and F1, F2 and F3, samples added with microcapsules produced with 20 % (w/v) reconstituted skim milk (RSM); with 10 % (w/v) RSM and 10 % (w/v) inulin; and with 20 % (w/v) inulin, respectively. The samples were submitted to the sensory acceptability regarding attributes aroma, taste, texture and overall acceptance, in a monadic way, with 50 untrained panelists, using a nine-point structured hedonic scale (1-dislike extremely; 9-like extremely). Moreover, consume intention of samples was evaluated using a five-point scale (1-definitely would not consume; 5-definitely would consume). The results did not show significant difference (P>0.05) between samples for all attributes evaluated, indicating that the addition of different formulations of microcapsules did not interfere in the acceptability. The majority of the panelists classified the attributes with scores 8 and 9, which in the structured hedonic scale means like and like extremely. With respect to the consume intention test, the samples were classified with scores 4 and 5, which means probably would consume and definitely would consume.