Carob is a Mediterranean leguminosae which powder is a natural sweetener used as cocoa substitute because its similar flavor and appearance. Carob is rich in dietary fiber and polyphenols. Dietary fiber, in addition to the antioxidative activities, prevents cancer, lows blood lipid and glucose, reducing the risk of coronary heart disease. The consumption of foods such as snacks has increased and the cereal bars meet this trend with the difference of being healthier products. The association between cereal bars and healthy foods has already been documented in the food sector. Due to these factors, it is important the functional products consumption to improve the consumer's health. Functional cereal bars are a convenient option because of their portability. The aim of this study was to evaluate the safety of using carob as a food ingredient and to offer applications of this ingredient through the development of new products. Two types of cereal bars containing carob and other functional ingredients were developed: BFG: functional bar with glucose and BFD: functional bar diet. The bars were evaluated for centesimal composition, microbiological, texture and sensory analysis. Both bars had 22% and 24.5% fiber respectively, making both bars products that are high level in dietary fiber. The microbiological results were satisfactory. The BFD bar had the highest value for hardness. The BFG received the highest scores for overall acceptability and sweetness. The results show preference for the BFG bar, which was expected due to the BFD bar being a diet version of the product.