Guava (*Psidium guajava* L.) is one of the most important fruits in tropical and subtropical regions, due to its high fresh consumption and its elevated nutritional value. The minimal processing of fruits aims to provide a product that has characteristics similar to fresh products', maintaining their nutritional qualities. The objective of this work was to evaluate the quality of osmotically dehydrated guavas in comparison with control samples during the storage period under refrigeration at 5°C. The experiment was carried out using a completely randomised design with 4 repetitions. The guavas were minimally processed and osmotically dehydrated in sucrose at 60ºBrix. Analyses of soluble solids, pH, titratable acidity, vitamin C, ratio, reducing sugars, total sugars, anthocyanin, humidity, mass loss, colour and ashes were carried out in triplicates. Results of the physicochemical characteristics of guavas under osmotic treatment showed that there was a considerable reduction on moisture content and an increase on soluble solids content of the samples, providing the guavas with a 21-day shelf life. This period is superior in three days, when compared to the control samples, which had a 15-day shelf life, due to the fact that the fruits were not adequate for consumption. Under the conditions of this study, it is necessary to emphasise the importance of the usage of osmotic dehydration to conserve guava slices, for the osmotic treatment made possible the obtention of a stable product with physicochemical characteristics similar to fresh samples.