In Brazilian market, guava (Psidium guajava L.), especially red pulp guavas, corresponds to 75% of consumer's preference due to its high nutritional value and it is an indispensable characteristic when it comes to industrial making of guava jam, guava in syrup, ice-creams and concentrated pulps. This work aimed to evaluate the physicochemical quality of guava (Psidium guajava L.) slices, cultivar “Paluma”, stored under refrigeration and submitted to combined techniques of osmotic dehydration and drying in hothouses. The experiment was carried out using completely randomised design with 4 repetitions. Analyses of pH, soluble solids, titratable acidity, vitamin C, ratio, reducing sugars, total sugars, anthocyanin, moisture, mass loss, colour and ashes were made in triplicates. Moisture content of osmotically dehydrated guava slices and of slices that were osmotically dehydrated and, afterwards, dried in a hothouse, showed reduction of 34% and 77%, respectively. Significant differences between osmotically dehydrated treatments and treatments that were osmotically dehydrated and, afterwards, dried in a hothouse, were found, especially in moisture and sugars. The other variables were kept without significant alterations during conservation. These results suggest drying as an alternative to lengthen the fruits storage period, since guavas dehydrated in sucrose and dried in hothouses were conserved for 24 days, preserving their physicochemical qualities, which are desirable by the consumer.