Fruit consumption is valorized specially due to bioactive compounds. Mangoes contain some of these substances that could be lost during the osmotic dehydration (OD) by lixiviation and degradation. However this treatment could also reduce nutrient losses and impregnate substances of interest through solute transfer from the osmotic solution to the food. So this study aimed to evaluate the uptake of ascorbic acid and the level of phenolic compounds in slices ‘Palmer’ mango during OD treatment with addition of ascorbic acid at osmotic solution.

The OD was performed using full factorial experimental design $2^3$ with four central points, two levels and two blocks. The factors were sucrose concentration (40 to 60% w/w), ascorbic acid concentration (0.5 to 2% w/w) and processing time (60 to 180 min). The responses were levels of vitamin C and total phenolic compounds. Data were analyzed using response surface methodology. Vitamin C was quantified by tritimetric method and phenolic compounds were quantified by spectrophotometric method. The addition of ascorbic acid to the osmotic solution and the osmotic process time had a significant effect on the content of vitamin C and phenolic compounds. High quantity was determinate in treatment with higher levels of ascorbic acid concentration and time process. The regression mathematical models were obtained for both responses. Therefore, it is possible to impregnate ascorbic acid in the food by OD, improving mangoes nutritional value. However, it should be emphasized that the impregnation of ascorbic acid influenced the quantification of the phenol compounds. Acknowledgements: CAPES; Vallens Ingredients Industrial Ltda.