Background: Gastrointestinal diseases are caused by lack of body fluids (dehydration) and lack of fibrous food consumption. Fiber can help maintain gastrointestinal health. Based on the Riskesdas 2013, the national prevalence of less eating fruits and vegetables in the population at the age > 10 years old is 93.5%. Pineapple fruit one of the fruit that is used as raw material to make nata de pina. With the addition of inulin is expected to improve taste and nutritional value in nata de pina. **Objective:** To determine the effect of inulin addition on organoleptic quality and nutritional value on nata de pina. **Methods:** The method used in this study was experimental with 4 treatments is without addition of inulin (T0), inulin addition of 6g (T1), 10g (T2) and 14g (T3). The organoleptic test using VAS (*Visual Analog Scale*) method was performed by 30 somewhat trained panelists. Data analysis using One Way Anova statistical test and Bonferroni advanced test. **Results:** The results showed that the addition of different inulin gave a significant effect (p ≤ 0,05) on the quality and nutrient content of nata de pina. Treatment with the addition of 14g inulin (T3) resulted in nutritional value of water content, ash content, fat content, fiber content, protein content and highest carbohydrate content. While the results of the acceptance test of nata de pina treatment with the addition of 10g inulin (T2) is the most preferred overall. **Conclusion:** The more inulin addition in nata de pina the higher the nutritional value contained in nata de pina. For the next research is suggested to make the addition of second inulin on the 7th day of fermentation to maintain the fiber content.

Keywords: *nata*, *pineapple*, *prebiotics*, *inulin*, *fiber*