

ABSTRACT

Packaging plays an important role in maintaining product quality. Some of packaging's basic functions are containment, protection, communication, and convenience. As a communication function, it not only provides basic information about the product, but also as a commercial purpose to attract customers. However, some cases might happen in the development of visual defects of packaging which reduce its attractiveness, one of them is shrinkage packaging. The aim of this study is to determine the factor affecting shrinkage packaging by root cause analysis and verification of the effect of temperature towards packaging. Based on the result, there are many possible factors in the development of shrinkage packaging visualized by using a fishbone diagram, and one of the factors is the influence of the environment, which is temperature. A series of data collection of temperature and packaging visuals is further analyzed and a finding of 10.82% in a suspected shrinkage sample was collected and recorded. However, there is an inconsistent significant relationship between temperature and slug visual based on the statistical analysis. It can not be verified that temperature has no significant relationship with packaging shrinkage for 14 days observation. Therefore, it is recommended for further improvement of this study by extending the experiment to a longer duration.

Keywords: *Shrinkage, Packaging, Temperature, Gas transmission rate, Root cause analysis*