

**ASSESSMENT OF EFFECTIVENESS OF
DIFFERENT DESICANT USAGE IN FLOUR
EXPORTATION**

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ABSTRACT

A desiccant is a product that absorbs moisture from the air, thus reducing the relative humidity in a controlled environment and protects the goods from the moisture damage. This study aims to analyze and recommend effective application rate of desiccant by considering the moisture absorption rate of commonly used desiccants (super dry and power dry) during marine transportation to different destinations by Prima Ceylon Private Limited. The study drew a sample of 156 wheat flour containers which were exported among South Asian countries (Hong Kong, Singapore, Bangkok, Indonesia and Malaysia). Sampling was done using stratified random sampling method and the data obtained were analyzed using SAS software package. Obtained results reveal that, the power dry showed 2.61g/g of moisture absorption rate, which is 0.09 g higher ($P < 0.05$) than the moisture absorption rate of super dry (2.52g/g) together with a lower application rate of desiccant to mean voyage duration for particular destinations. Further, it can be recommended that, 0.364 g/kg flour application rate of power dry and 0.382 g/kg of super dry for six days of mean voyage for Singapore. Moreover, Malaysia and Hong Kong accounted for 11.5 days of mean voyage, super dry recorded with 0.357 g/kg application rate of and 0.340 g/kg of power dry. In addition, Indonesia and Bangkok assured with an application rate of 0.357 g/kg flour of super dry and 0.350 g/kg flour of power dry with accordance to 11.5 days of mean voyage.

Key words – Desiccant, Application rate, Moisture absorption rate, Different destinations, Voyage duration