



Conventional empirical modelling of moisture sorption isotherms of 'Nutrimix' powder

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ABSTRACT : Conventional empirical models have been proposed to predict sorption (adsorption and desorption) isotherms of fortified weaning food 'Nutrimix' (an Indian dairy product), at four temperatures, *i.e.*, 15°, 25°, 35° and 45°C over a water activity range of 0.11–0.97. Five conventional empirical sorption models (Halsey, Caurie, BET, Oswin and GAB models) have been explored for fitting the sorption data. The dataset comprised 192 data points. Halsey model having accuracy as 93.37 per cent, Caurie model having accuracy as 91.45 per cent, BET model having accuracy as 81.21 per cent, Oswin model having accuracy as 94.42 per cent and GAB model having accuracy as 94.52 per cent. Comparing all five conventional empirical models, GAB was found the best conventional empirical sorption model having accuracy as 94.52 per cent.

KEY WORDS : Empirical sorption models, Milk, Moisture sorption isotherms, Nutrimix, Prediction, Weaning food

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