

**ASSESSMENT OF NON-PERMITTED DYES IN CHILI POWDER IN THE  
MARKETS OF MANDALAY**

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**ABSTRACT**

Non-permitted food dyes are one of the most widely used and dangerous food additives that are associated with various diseases like urticaria, asthma, neurotoxicity and developmental toxicity. This study aims to assess the non-permitted dyes in chili powder in the markets of Mandalay City. Cross-sectional descriptive study containing both quantitative and qualitative method was used with 100 samples of chili powder and 15 in-depth interviews. Chili powder samples were tested by paper chromatography. Among 100 chili powder samples (50 coarse and 50 fine chili powder), non-permitted dyes were detected in 32 samples. Permitted-dye alone was detected in 11 samples and 57 samples did not contain any types of dyes in paper chromatography. Among 32 positive samples, 26 samples were found to be contaminated with non-permitted dyes alone and 6 samples were found as containing both permitted and non-permitted dyes. In this study, most commonly used non-permitted dyes were Rhodamine-B (17 samples) and Sudan III (15 samples). Most of the participants of qualitative study noticed about that non-permitted dyes issue mainly from newspaper. All of grinding owners and grocery sellers answered that they are not grinding or selling those contaminated chili powder during these years because of regular examination of products by authorized person and also shop's image or prestige. However there will be still remaining of sellers who have been selling those contaminated chili powders according to test results. All of the participants mostly preferred with natural products which are free from any kind of dyes because they knew those dyes gave adverse health effects to them and their family members. Grinding owners and grocery sellers do not know clearly about adverse health effects but some consumers did. Their opinions for reducing of non-permitted dyes in their daily preparation were regular examination of food-related products and regular provision of health education/promotion sessions to all levels of community. Those findings might support the local authority or responsible body to intensify actions concerning non-permitted dyes in the markets of the Mandalay.