

## Regulation of the banana fruits ripening by using different treated food paper packaging

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**Abstract:** The objective of the present work was to study how we can control the regulation of the banana fruits ripening when using polyurethane foam as coating mixture for food packaging paper material. For this purpose, a surface treatment to the food packaged paper (TFP) was carried out by coating with polyurethane (PU) and tannic acid (T) to be compared with the untreated food packaged paper (UTFP). When Maghrabi banana fruits were at their mature stage, they were treated with either scratch or ethrel followed by packaging with UTFP and TFP to delay and/or manage ripening to reach of the commercial and economic value as well as providing a delicious fruits for consumers. All treated fruits were divided into two groups; the first group was held at room temperature, while the second group was stored at  $15 \pm 1$  °C. Sampling on the periodical time was carried for good quality and respiration rate till ripening stage. The results showed that banana fruits at their mature stage could be treated with ethrel when packed with TFP coated with both PU and T under room temperature condition, whereas under storage at  $15 \pm 1$  °C, and scratch method can be used with the same coated paper for packaging where it achieves good quality for banana fruits.

**Keywords:** Banana fruits ripening, Food packaging paper, Ethrel, Scrape, Polyurethane foam, Tannic acid.

Abd El-Naby S.K. M. *et al* /Int.J. ChemTech Res. 2016,9(3),pp 118-126.

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