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Spectrophotometric Methods for the Determination of Benzoyl Peroxide from the Wheat Flour Sample

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ABSTRACT

New spectrophotometric method for the determine Benzoyl peroxide from the wheat flour was developed recently. The detection principle was based on the reaction between Benzoyl peroxide & potassium iodode in alcoholic medium. Here in this reaction potassium iodide oxidized by Benzoyl peroxide, it generates coloured iodine. There was maximum absorption peak in 580 nm wavelenghth. Potassium iodide system determine Benzoyl peroxide(Result).Wheat flour dissolved in ethanol by extraction of ethanol & centrifugal of Benzoyl peroxide. Under the selected conditions, the linear range for quantification of Benzoyl peroxide was observed between 10 mg/L to 50 mg/L . The limit of detection (LOD) was 30 mg/L. The developed method obtained superior precision using 10 repeatability. The proposed methodology was successfully applied to determine Benzoyl peroxide in wheat flour samples. Other methods for the detection is based on Benzoyl peroxide reacted with 2,2′-azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) (ABTS) to obtain a blue-green colored product that was detected at 415 nm by spectrophotometry. To determine benzoyl peroxide content in wheat flour and flour products based on spectrophotometry. In phosphoric acid medium potassium iodide oxidized by benzoyl peroxide oxidation then generated colored iodine and starch there was maximum absorption peak in 585 nm wavelength there by the starch potassium iodide system spectrophotometry was established to determine benzoyl peroxide.