World Academy of Science, Engineering and Technology
International Journal of Biomedical and Biological Engineering
Vol:8, No:08, 2014

Extraction and Identification of Natural Antioxidants from Liquorices (Glycyrrhiza glabra) and Carob (Ceratonia siliqua) and Its Application in El-Mewled El-Nabawy Sweets (Sesames and Folia)

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Abstract : The objective of this study was to determine, identify and investigate the effects of natural antioxidants of licorice and carob. Besides, their effects as powder and antioxidant extracts addition on refined sunflower oil stability as natural antioxidants were evaluated. Total polyphenol contents as total phenols, total carotenoids and total tannins were 353.93mg/100g (gallic acid), 10.62mg/100g (carotenoids) and 83.33mg/100g (tannic acid), respectively in licorice, while in carob, it was 186.07, 18.66 and 106.67, respectively. Polyphenol compounds of the studied licorice and carob extracts were determined and identified by HPLC. The stability of refined sunflower oil (which determined by peroxide value and Rancimat) was increased with increasing the level of polyphenols extracts addition. Also, our study shows the effect of addition of these polyphenols extracts to El-mewled El-nabawy sweets fortified by full cream milk powder (sesames and folia). We found that, licorice and carob as powder and polyphenols extracts were delayed the rancidity of sesame and peanut significantly. That encourages using licorice and carob as powder and polyphenols extracts as a good natural antioxidants source instead of synthetic antioxidants.

Keywords : licorice, carob, natural antioxidants, antioxidant activity, applications
Conference Title : ICMBPS 2014 : International Conference on Medical, Biological and Pharmaceutical Sciences
Conference Location : Kuala Lumpur, Malaysia
Conference Dates : August 25-26, 2014