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Qualitative, quantitative screening and proximate analysis of commercially available food colorants tartrazine and curcumin: Before and after addition to feed

Sadaf Shakoor[1], Amin Ismail[1], Mohd Redzwan Sabran[1], Zia-Ur-Rahman[2]
[1]University Putra Malaysia, Malaysia
[2]University of Agriculture Faisalabad, Pakistan

Statement of the problem: Current many study mentioned about severe health issues from constant employ of coloring agents through food. So, it is important to understand the consequences by the use of food color in food products by worldwide. Food color depicted as an interesting ingredient for food industry mainly due to their appearance imparting into food products. The synthetic food color such as tartrazine derived from coal tar whereas natural, curcumin are obtained from the medicinal plants *Curcuma longa* or plant parts. Methodology & Theoretical Orientation: Proximate analysis, qualitative and quantitative phytochemicals screening of food colors and feed containing food colors were analyzed in aqueous, ethanolic and methanolic extracts. Purpose of this study is to evaluate qualitative and quantitative screening of commercially available food colorants tartrazine and curcumin and their effect on nutritive value of rats feed. Feeds were prepared by addition of low (9.6mg/kg; 3.85mg/kg) and 10 times high dosage (96mg/kg; 38.5mg/kg of tartrazine and curcumin (Control, low tartrazine, high tartrazine, low curcumin, high curcumin feed). Findings: Results revealed that slight variation was seen in moisture (27.1 % in LT), protein (21.87% in HT), fat (4.18% in LT), ash (7.26% in HT), and fiber (3.85% in HC) content of all five feed. The qualitative analysis reflect the presences of alkaloids, anthraquinone, carbohydrates, coumarines, flavonoids, glycosides, resins, saponins and tannins in the extracts of feed. The quantitative analysis exposed the maximum concentration of carbohydrates (3691mg/dl) flavonoids (403µg/ml), phenols (114µg/ml) in methanolic extract of HC, alkaloids (508mg/dl) in methanolic extract of control feed and tannins (297g/ml) in methanolic extract of LC feed. Conclusion & Significance: Food coloring agent incorporation affects nutritive value of feed, showed presence of some anti-nutritional substances i.e. tannins and saponins. Whereas, it is necessary to fruitfully apply tartrazine and curcumin during processing and formation of food stuffs.

Biography

Sadaf Shakoor has her expertise in food, nutrition and food services for the maintenance of normal daily food intake. She is basically a Lecturer in the field of nutrition at University of Agriculture, Faisalabad, She have experience as nutritionist, both in hospital and education institutions. Pakistan. She is pursuing PhD in the subject of Nutritional Sciences at University Putra Malaysia. She is dealing with food color specially tartrazine and curcumin in her PhD research project. She has skills and knowledge necessary to be effective at promoting overall improved health.

sadaf.shakoor@yahoo.com

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