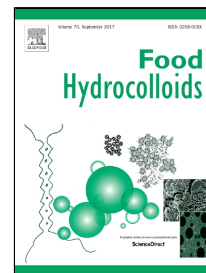


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Persian Gum: A Comprehensive Review on its Physicochemical and Functional Properties

Mohsen Dabestani, Rassoul Kadkhodaei, Glyn Owen Phillips, Soleiman Abbasi



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Persian Gum: A Comprehensive Review on its Physicochemical and Functional Properties

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Abstract

Persian gum is an exudate polysaccharide from the trunk and branches of wild almond tree which has recently attracted the attention of many researchers owing to its unique properties and the diverse possible applications it may find in the food industry. This article provides a comprehensive review on the physicochemical, structural and functional characteristics (e.g., emulsifying properties) of the gum and introduces a number of attempts made with the view to use it for improving the flow behavior, texture or shelf life stability of food products.

Keywords: Persian gum, *Amygdalus scoparia*, *Prunus scoparia*, Polysaccharide.

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1. Introduction

Gums are a group of polysaccharides which are categorized amongst the most popular ingredients commonly used in the food industry for a wide range of applications including viscosity enhancement, texture improvement, foam and emulsion stabilization, film formation and coating purposes. This along with the great attention of consumers towards healthier and natural foods in the recent decades has led to an increasing global demand for natural gums of appropriate functional properties and thus has encouraged the researchers to seek new resources of gums. Of the various potential resources, the plant kingdom owing to the great diversity of its species has often been considered as one of the most important choices to meet this goal. A large number of natural gums have been studied over the last decades (Balaghi, Mohammadifar, & Zargaraan, 2010; Dakia, Blecker, Robert, Wathelet, & Paquot, 2008; Dhami, et al., 1995; Funami, et al., 2009; Kang, Guo, Wang, Phillips, & Cui, 2015; Osman, et al., 1995; Rinaudo, 2006; Thrimawithana, Young, Dunstan, & Alany, 2010) but only a few have successfully been commercialized and launched on to the market (Katzbauer, 1998; Osman, Williams, Menzies, & Phillips, 1993; Ramaswamy, & Basak, 1992).

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