

Article

## Acaroid mite infestations (Astigmatina) in stored traditional Chinese medicinal herbs

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### Abstract

Acaroid mites are among the economically important pests infesting various plant materials. In an attempt to investigate the status of the mite pest prevalence in Chinese traditional medicinal herbal materials, we collected 1,810 samples of crude herbs from certain traditional Chinese drugstores in Huainan City, Anhui Province, China. In total, 45 species of mites belonging to 25 genera and 10 families were identified. The findings revealed that 64% (1,165/1,810) of the samples were infested by mites, suggesting that acaroid mites are common in the medicinal herbs in stores in Anhui Province. Since some mites are well documented as allergen producers, greater concerns and important measures should be paid and taken to prevent the mites from infecting the herbs associated with public health.

**Key words:** Acari, food mites, medicinal herbs, China

### Introduction

Grain mites, representing the Acaridia and Psoroptidia (Acari: Astigmatina), are among the most important pests which infest stored products and traditional Chinese medicinal herbs in areas of humid and warm climate (Hughes 1976). Hughes (1976) summarized the taxonomy, biology and geographical distribution of mites in stored foods, food products and houses, and described 101 species as pests of importance in human habitats. In China, mites in general infest the stored rice, wheat and other food products, making eventual quality deterioration of the foodstuffs, secondary infestation or even loss in production (Liu & Wang 1996; Feng *et al.* 2009). It was estimated that in China the mite infestation had affected 21% of grain stores in Shanghai area (Li 2000). Some studies conducted between 1989 and 1991 on food mite infestation in Sichuan, Fujian, Sha'anxi and Shanxi provinces revealed that 84% of the samples were infected with mites that refer to 79 species (Li & Fan 1997). This report is one part of the long-term projects started in 1994 and aims to identify the food mite infection with Chinese traditional medicinal herbs under the actual storage conditions in China.

### Materials and Methods

A total of 1,810 crude samples (10 grams per sample) from 181 species of Chinese traditional medicinal herbs were collected directly from the traditional Chinese medical storehouses. The