



**Afr. J. Agric. Res.**

[Vol. 2 No. 12](#)

Viewing options:

- Abstract
- Full text
- [Reprint \(PDF\)](#) (80k)

Search Pubmed for articles by:

[Razavi SMA](#)  
[Akbari R](#)

Other links:

PubMed Citation  
Related articles in  
PubMed

African Journal of Agricultural Research Vol. 2(12), pp. 663-666, December, 2007  
ISSN 1991- 637X© 2007 Academic Journals

*Full Length Research Paper*

## Terminal velocity of pistachio nut and its kernel as affected by moisture content and variety

Seyed M. A. Razavi\*, A. Rafe and R. Akbari

Department of Food Science and Technology, Ferdowsi University of Mashhad (FUM),  
Mashhad PO Box: 91775-1163, Iran

\*Corresponding author. E-mail: [S.Razavi@ferdowsi.um.ac.ir](mailto:S.Razavi@ferdowsi.um.ac.ir) . Tel: +98 511 8795618. Fax: +98 511 8787430

Accepted 26 July 2007

### Abstract

The terminal velocity data are necessary for the design of threshing, pneumatic conveying, fluidized bed dryer and cleaning the product from foreign materials. In this paper, terminal velocity of pistachio nut and its kernel for five major commercial Iranian pistachio varieties namely, Akbari, Badami, Kalle-Ghuchi, Momtaz and O'hadi were evaluated as a function of moisture content at five moisture contents levels in the range from initial moisture content at harvesting to completely industrial dried condition (37.6 - 4.0%w.b.). The results showed that terminal velocity of pistachio nuts varied from 9.8 - 12.44 m/s, whereas terminal velocity of kernels ranged between 8.30 - 11.10 m/s. The highest values of terminal velocity obtained for the nut and kernel of Kalle-Ghuchi variety that is, 12.44 and 11.1 m/s respectively, although the lowest values of terminal velocity were 9.6 and 9.06 which are related to Momtaz nut and Badami kernel. The effect of moisture content on terminal velocity of pistachio nuts and their kernels showed a linear increase with increasing moisture content.

**Key words:** Aerodynamics, terminal velocity, pistachio, moisture content, nut, kernel.

