

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)
 Author: [ADVANCED](#) | Volume Page
 Keyword: |

[TOP](#) > [Available Issues](#) > [Table of Contents](#) > Abstract

ONLINE ISSN : 1881-3984

PRINT ISSN : 1344-6606

Food Science and Technology Research

Vol. 8 (2002) , No. 2 pp.125-130


[\[PDF \(264K\)\]](#) [\[References\]](#)

Effect of Heat-Treatment on the Content and Polysaccharide Composition of Dietary Fiber

[Emiko TAKEYAMA](#)¹⁾, [Masako FUKUSHIMA](#)¹⁾ and [Akio TANIMURA](#)
1) Faculty of Life Science, 2Science for Living System, Graduate School, Showa Women's University

(Received: July 31, 2001)

(Accepted: December 11, 2001)

SDF (soluble dietary fiber) and IDF (insoluble dietary fiber) fractions were extracted from 14 different foods by the modified Prosky method. Ion exchange chromatography with DEAE cellulose was employed to examine each of the fractionated sugars. Aloe fractions were further subjected to gel chromatography to examine the effect of heating on molecular weight. The SDF fractions of anhydrous samples of okra, cabbage, celery, bitter melon, and carrot were large when autoclaved, while that of aloe was largest when unheated, and those of eggplant, edible burdock, Japanese radish, hijiki, and nameko were large when microwaved. The SDF fractions of moroheiya and okra included acid polysaccharides in large quantities, and acid polysaccharides increased further with autoclaving. The SDF fraction of celery did not show as pronounced a tendency for heat-induced increase of acid sugar. IR analysis confirmed that heating affected the functional groups of this fraction.

Keywords: [dietary fiber](#), [autoclave](#), [microwave](#), [acid polysaccharides](#), [IR analysis](#)

[\[PDF \(264K\)\]](#) [\[References\]](#)
Download Meta of Article [\[Help\]](#)[RIS](#)

To cite this article:

Effect of Heat-Treatment on the Content and Polysaccharide Composition of Dietary Fiber Emiko TAKEYAMA, Masako FUKUSHIMA and Akio TANIMURA, *FSTR*. Vol. **8**, 125-130. (2002) .

doi:10.3136/fstr.8.125

JOI JST.JSTAGE/fstr/8.125

Copyright (c) 2007 by Japanese Society for Food Science and Technology



[Japan Science and Technology Information Aggregator, Electronic](#)

