**List of Fibersol-2’s Scientific Papers**

**just better.® prebiotic fiber supplement**

Ingredient: Non-GMO Soluble corn fiber (Fibersol-2AG Non-GMO)

**Pine Fibre-C (PF-C)** is the trade name for Fibersol-2 in the Japanese market. **Pine Fibre (PF)** is a product for the Japanese market, which contains 65% Fibersol-2 & 35% maltodextrin. **Indigestible Dextrin** is the chemical name used in Japan for Fibersol-2.

### R: Review

**R-1** Development and application of low caloric modified starch
K Okuma and R Takahashi
【Technical Journal on Food Chemistry and Chemicals, 1990, 6 (11), 62-67】

**R-2** Fibersol-2: a Soluble, Non-digestible, Starch-derived Dietary Fibre
K Okuma and S Wakabayashi

**R-3** Effects of resistant maltodextrin on metabolism of glucose and lipids
K Okuma and Y Kishimoto

**R-4** The effects of resistant maltodextrin on blood glucose, insulin and triacylglyceride levels, and fat accumulation after meal feeding in humans, DT Gordon

**2004 DF Symposium Book**【Dietary Fiber: An international perspective for harmonization of health benefits and energy values】

### A: Process, Safety, Energy Value, Analytical Method, etc.

**A-1** Pyrolysis of Starch and Its Digestibility by Enzymes - Characterization of Indigestible Dextrin-
K Okuma, I Matsuda, Y Katta and Y Hanno
【Denpun Kagaku, 1990, 37, 107-114】<full English translation from Japanese>

**A-2** Indigestible Fractions of Starch Hydrolysates and Their Determination Method
K Okuma and I Matsuda

**A-3** Production of Indigestible Dextrin from Pyrodextrin
K Okuma and I Matsuda

**A-4** Outline of Pinefibre: Safety Assessment/
【Matsutani’s Sales Promotion Material, 1990】<full English translation from Japanese>

**A-5** Effects of Dietary Fibers on the Diffusion of Glucose and Metal Ions through Cellulose Membrane
M Nomura, M Ohashi, T Nisigawa, M Kubota, K Ohkuma, Y Nakajima and H Abe

**A-6** Acute Toxicity and Mutagenicity Studies of Indigestible Dextrin, and Its Effect on Bowel Movement of the Rat
S Wakabayashi, M Satouchi, Y Ueda, K Ohkuma
【J. Food Hyg. Soc. Japan (Shokuhin Eiseigaku Zasshi), 1992 (33) 557-562】

**A-7** Safety of a long-term intake of a tea beverage containing indigestible dextrin
O Kajimoto, C Yoshimura, F Morimoto, M Henmi, K Ohki, T Takahashi, H Takeuchi
**A-8** Nondigestible Oligosaccharides Do Not Increase Accumulation of Lipid Soluble Environmental Contaminants by Mice  
Y Kimura, Y Nagata, CW Bryant, RK Buddington  

**A-9** Some Dietary Fibers Increase Elimination of Orally Administered Polychlorinated Biphenyls but Not That of Retinol in Mice  
Y Kimura, Y Nagata, RK Buddington  

**A-10** Energy Value of a Mixed Glycosidic Linked Dextrin Determined in Rats  
K Tsuji and DT Gordon  

**A-11** New Method for Determining Total Dietary Fiber by Liquid Chromatography  
K Ohukma, I Matsuda, Y Katta  
【J. AOAC Int., 2000, 83, 1013-1019】

**A-12** Determination of Total Dietary Fiber in Selected Foods Containing Resistant Maltodextrin by Enzymatic-Gravimetric Method and Liquid Chromatography: Collaborative Study  
DT Gordon and K Okuma  
【J. AOAC Int., 2002, 85, 435-444】

**A-13** Evaluation of the relative available energy of several dietary fiber preparations using breath hydrogen evolution in healthy humans  
T Oku, S Nakamura  
【J Nutr Sci Vitaminol, 2014, 60, 246-254】

**A-14** Availability, fermentability, and energy value of resistant maltodextrin: modeling of short-term indirect calorimetric measurements in healthy adults  
T Goda, Y Kajiya, K Suruga, H Tagami, G Livesey  
【Am J Clin Nutr, 2006, 83, 1321-1330】

**A-15** Comprehensive measurement of total nondigestible carbohydrates in foods by enzymatic-gravimetric method and liquid chromatography.  
T Nishibata, K Tashiro, S Kanahori, C Hashizume, M Kitagawa, K Okuma, DT Gordon  

**A-16** The maximum single dose of resistant maltodextrin that does not cause diarrhea in humans.  
Y Kishimoto, S Kanahori, K Sakano, S Ebihara  

**A-17** The metabolizable energy of dietary resistant maltodextrin is variable and alters fecal microbiota composition in adult men.  
【J. Nutr., 2014, 144 (7), 1023-1029】

Note: Safety assessments (single dose, long term) were also reported in papers listed as  
[B: Intestinal Regularity & Prebiotic Effect] to [D: Lipid Metabolism].

**B-1** Effects of Indigestible Dextrine on Bowel Movements  
M Satouchi, S Wakabayashi, K Ohkuma, K Fujiwara, A Matsuoka  

**B-2** Effect of Jelly Drink Containing Dietary Fiber on Human Defecation  
K Kimura, M Ida, T Matoba  

**B-3** Effects of the administration of soft drink containing indigestible dextrin on defecation frequency and fecal characteristics of Japanese healthy female volunteers  
M Inaki, S Fujii, H Iino  
【J. Nutritional Food, 1999, 2 (1), 44-51】<full English translation>

**B-4** Effect of drinks supplemented with indigestible-dextrin on fecal amount  
T Umekawa, K Fujii, T Matsuoka  

**B-5** Effects of Cookies Containing Indigestible Dextrin on Defecation and Fecal Condition in Human Subjects.  
H Ogiso, Y Ito, K Hayashi  

**B-6** Glucose-Based Oligosaccharides Exhibit Different In Vitro Fermentation Patterns and Affect In Vivo Apparent Nutrient Digestibility and Microbial Populations in Dogs  
EA Flickinger, BW Wolf, KA Garleb, JM Chow, GJ Leyer, PW Johns, GC Fahey  
【J. Nutritional Food, 2004, 134, 135】

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《B: Intestinal Regularity & Prebiotic Effect》

**B-1** Effects of Indigestible Dextrine on Bowel Movements  
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【J. Nutritional Food, 2004, 134, 135】
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<th>Ref</th>
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<tr>
<td>B-7</td>
<td>The Effects of rise crackers containing indigestible dextrin on female defecation</td>
<td>S Shi, K Kato, S Kusuhara</td>
<td>J. Nutritional Food</td>
<td>2000</td>
<td>3 (2), 37-44</td>
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<td>B-10</td>
<td>Effect of cooked and cured loin-roll ham containing indigestible dextrin on fecal amount and defecation frequency</td>
<td>M Sato, Y Oishi, T Ohmori, F Morimatsu, H Inage, I Watanabe, R Yamada, S Kimura</td>
<td>J. Nutritional Food</td>
<td>2000</td>
<td>3 (4), 47-54</td>
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<td>B-15</td>
<td>Effectiveness of Dietary Fiber on Irritable Bowel Syndrome (IBS)</td>
<td>Fukuoka Takano Hospital Coloproctology Center, Takano Hospital</td>
<td>Jpn J Psychosomatic Medicine</td>
<td>1994</td>
<td>34 (Abstract from Meeting), 97</td>
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<td>B-18</td>
<td>Comparison of Different Fibers for In Vitro Production of Short Chain Fatty Acids by Intestinal Microflora</td>
<td>AM Pytkas, LR Juneja, JL Slavin</td>
<td>J Med Food</td>
<td>2005</td>
<td>8(1), 113-116</td>
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<td>B-19</td>
<td>Gut microbiota correlates with energy gain from dietary fibre and appears to be associated with acute and chronic intestinal diseases</td>
<td>M Ukhanova, T Culpepper, D Baer, D Gordon, S Kanohori, J Valentine, J Neu, Y Sun, X Wang, V Mai</td>
<td>Clin Microbiol Infect, 2012</td>
<td>18(Suppl. 4), 62-66</td>
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B-21 Characterisation and *in vitro* fermentation of resistant maltodextrins using human faecal inoculum and analysis of bacterial enzymes present
Rösch C, Venema K, Gruppen H, Schols HA
【*Bioactive Carbohydrates and Dietary Fibre, 2015, 6, 46-53*】

B-22 Digestion-resistant maltodextrin effects on colonic transit time and stool weight: a randomized controlled clinical study.
【*Eur J Nutr. 2015 Oct 6, published on line*】

B-23 Continuous intake of resistant maltodextrin enhanced intestinal immune response through changes in the intestinal environment in mice.
Miyazato S, Kishimoto Y, Takahashi K, Kaminogawa S, Hosono A

B-24 Effects of resistant maltodextrin on bowel movements: a systematic review and meta-analysis
N. Watanabe, M. Suzuki, Y. Yamaguchi, Y. Egashira
【*Clin Exp Gastroenterol, 2018, 11, 85-96*】

C: Sugar Metabolism

C-1 Effects of indigestible dextrin on glucose tolerance in rats
S Wakabayashi, Y Kishimoto, A Matsuoka
【*J. Endocrinology, 1995, 144, 533-538*】

C-2 The Effects of Indigestible Dextrin on Sugar Tolerance: I. Studies on Digestion - Absorption and Sugar Tolerance
S Wakabayashi 【*Folia Endocrinol., 1992, 68, 623-635*】 <full English translation>

C-3 Effects of Indigestible Dextrin on Sugar Tolerance: II. Effect of Continuous Administration in Rats Fed on a High Sucrose Diet
S Wakabayashi, Y Ueda, A Matsuoka

C-4 The Effects of Indigestible Dextrin on Sugar Tolerance: III. Improvement in Sugar Tolerance by Indigestible Dextrin on the Impaired Glucose Tolerance Model.
S Wakabayashi 【*Folia Endocrinol., 1993, 69, 594-608*】 <full English translation>

C-5 Effects of Indigestible Dextrin on Blood Glucose and Insulin Levels after Various Sugar Loads in Rats.
S Wakabayashi, Y Ueda, A Matsuoka

C-6 Effect of administration of indigestible dextrin prepared from corn starch on glucose tolerance in streptozotocin-diabetic rats.
M Tashiro, K Mizuho

C-7 Effects of Indigestible Dextrin on Blood Glucose and Urine C-peptide Levels Following Sucrose Loading.
Y Ueda, S Wakabayashi, A Matsuoka
【*J. Japan Diab. Soc., 1993, 36, 715-723*】 <full English translation>

C-8 Effects of indigestible dextrin-containing green tea on blood glucose level in healthy human subjects.
H Shinohara, H Tsuji, A Seto
【*J. Nutritional Food, 1999, 2 (1), 52-56*】 <full English translation>

C-9 Effect of indigestible dextrin-containing soft drinks on blood glucose level in healthy human subjects.
N Mizushima, Y Chiba, S Katsuyama, Y Daigo, C Kobayashi

C-10 Effect of indigestible dextrin-containing tofu on blood glucose level in healthy human subjects.
K Uno, K Takagi, M Akaza, N Takagi, N Yoshio, I Maeda

C-11 Effect of indigestible dextrin on postprandial rise in blood glucose levels in man
S Wakabayashi, Y Kishimoto, S Nanbu, A Matsuoka
| C-16 | Glycemic response to a rapidly digested starch is not affected by the addition of an indigestible dextrin in humans. BW Wolf, TMS Wolever, C Bolognesi, BA Zinker, KA Garleb [Nutrition Research, 2001, 21, 1099-1106] |
| C-18 | Interventions to lower the glycemic response to carbohydrate foods with a low-viscosity fiber (resistant maltodextrin): meta-analysis of randomized controlled trials G Livesey and H Tagami [Am J Clin Nutr, 2009, 89: 114-125] |
| C-19 | Effects of Dietary Fiber Enriched Liquid Formula on Postprandial Glycemic Parameters H Sonoki [ILSI Japan, 2008, 95, 10-17] |
| C-21 | Soluble dietary fiber (Fibersol-2) decreased hunger and increased satiety hormones in humans when ingested with a meal. Z Ye, V Arumugam, E Haugabrooks, P Williamson, S Hendrich [Nutr Res, 2015 Mar 18. [Epub ahead of print]] |
### D-1 Hypocholesterolemic Effect of Dietary Fiber: Relation to Intestinal Fermentation and Bile Acid Excretion.
Y Kishimoto, S Wakabayashi, H Takeda

### D-2 Effect of Indigestible Dextrin on Cholesterol Metabolism in Rat
S Wakabayashi, M Satouchi, Y Nogami, K Ohkuma, A Matsuoka

### D-3 Effects of Intravenous Injection and Intraperitoneal Continual Administration of Sodium Propionate on Serum Cholesterol Levels in Rats.
Y Kishimoto, S Wakabayashi, H Takeda

### D-4 Effects of Long-term Administration of Indigestible Dextrin as Soluble Dietary Fiber on Lipid and Glucose Metabolism.
M Nomura, Y Nakajima, H Abe

### D-5 Continuous Administration Tests of Indigestible Dextrin I: Study on the effects of the improvement of fat metabolism in healthy volunteers.
A Matsuoka, M Saito, S Nagano

### D-6 Continuous Administration Tests of Indigestible Dextrin II: Study on the effects of the improvement of fat metabolism in patients with non-insulin-dependent diabetes mellitus.

### D-7 Product Evaluation: Effect of PET SLIM on Treatment of Obesity, T Hosoido
【CAP 523, 75-77 (1993)】<English summary>

### D-8 Nutritional Management of Cardiovascular Risk Factors

### D-9 Effects of a Food for Specified Health Use (FOSHU) which contains indigestible dextrin as an effective ingredient on glucose and lipid metabolism, K Tokunaga, A Matsuoka

### D-10 Efficacy of tea drink containing indigestible dextrin
F Kawasaki, M Matsu, T Hiramatsu, K Hiroe, K Kawahara, K Moriya, K Kaku
【J. Nutritional Food, 2000, 3 (1), 65-72】< full English translation>

### D-11 Effects of instant miso-soup containing indigestible dextrin on moderating the rise of postprandial blood glucose levels, and safety of long-term administration
Y Kishimoto, S Wakabayashi, K Yuba
【J. Nutritional Food, 2000, 3 (2), 19-27】<full English translation>

### D-12 Beneficial effects of a new indigestible dextrin-containing beverage on lipid metabolism and obesity-related parameters.

### D-13 Effects of Long-term Administration of Indigestible Dextrin on Visceral Fat Accumulation
Y Kishimoto, S Wakabayashi, K Tokunaga

### D-14 Effects of a tea beverage containing indigestible dextrin on the serum triglyceride level in subjects with mild hypertriglyceridemia

### D-15 Suppressive effect of resistant maltodextrin on postprandial blood triacylglycerol elevation

### D-16 Effect of Indigestible Dextrin on Visceral Fat Accumulation

### D-17 Effect of Resistant Maltodextrin on Digestion and Absorption of Lipids
### Improvement Effect of Resistant Maltodextrin in Humans with Metabolic Syndrome by Continuous Administration

C Hashizume, Y Kishimoto, S Kanahori, T Yamamoto, K Okuma, K Yamamoto  
【Journal of Nutritional Science and Vitaminology, 2012, 58, 423-430】

### Effect of carbonated beverage containing resistant maltodextrin on postprandial serum triglyceride —A randomized, double-blind, placebo-controlled, crossover study—

T Tanaka, J Nakamura, Y Kitagawa, H Shibata, H Sugimura  
【Jpn Pharmacol Ther, 2011, 39, 813-821】

### Inhibitory Effect of Tea Containing Resistant Maltodextrin on the Elevation of Serum Triglyceride after Intake of Lipid

T Hironaka, Y Kishimoto, H Matsubara, Y Matsuoka  
【Jpn Pharmacol Ther, 2008, 36, 445-451】

### Effects of mixing tea beverage containing resistant maltodextrin on postprandial serum triglyceride and safety evaluation of long-term or excessive intake of the beverage

N Kametani, R Asakura, H Mitsuda, N Shioya, Y Komori  

### Favorable Effect of Resistant Maltodextrin on Postprandial Blood Glucose, Insulin and Triglyceride Levels

Y Kishimoto, N Hayashi, T Yamada, K Yuba, K Yamamoto  
【Jpn Pharmacol Ther 2009, 37, 277-283】

### Effect of Beverage Containing Resistant Maltodextrin on Postprandial Serum Triglyceride and the Safety Evaluation of Long-term or Excessive Intake of the Beverage

F Sato, A Saito, H Miyawaki, I Takehara, T Miyakoshi, N Takahashi  
【Jpn Pharmacol Ther 2009, 37, 857-866】

### Effect of Carbonated Beverage Containing Indigestible Dextrin on Postprandial serum Triglyceride

M Suzuki, H Wakabayashi, A Yoshida, K Deuchi, N Shioya, H Itakura  
【Jpn Pharmacol Ther 2010, 38, 637-643】

### Effect of Carbonated Beverage Containing Resistant Maltodextrin on postprandial Serum Triglyceride and the Safety Evaluation of Long-term or Excessive Intake of the Beverage

Y Kobayashi, Y Kaneko, M Katayama, H Itakura  
【Jpn Pharmacol Ther 2013, 41, 863-875】

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**E: Mineral Absorption**

### Promotive effects of resistant maltodextrin on apparent absorption of calcium, magnesium, iron and zinc in rats, S Miyazato, C Nakagawa, Y Kishimoto, H Tagami, H Hara


### Evaluation of effectiveness of indigestible dextrin on female university students suspected to have anemia

C Kumashiro, Y Kishimoto, S Miyazato, M Hashimoto, C Yoshimura and M Nonomura  

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**F: Satiety**

### Soluble dietary fiber (Fibersol-2) decreased hunger and increased satiety hormones in humans when ingested with a meal. Z Ye, V Arumugam, E Haugabrooks, P Williamson, S Hendrich  
【Nutr Res, 2015 Mar 18, [Epub ahead of print]】

### Effects of High Plant Protein and High Soluble Fiber Beverages on Satiety, Appetite Control and Subsequent Food Intake in Healthy Men

D. Fernandez-Raudales, M.Yor-Aguilar, J. Andino-Segura, A. Demandez, R. Egbert, J. Lopez-Cintrón  
【Food and Nutrition Sciences, 2018, 9, 751-762】