

เอกสารอ้างอิง

- กฤษณา ชุติมา. 2545. กลืนข้าวหอน. ว. ราชบันฑิตยสถาน. 4 : 1265-1267.
- กระทรวงพาณิชย์. 2541. มาตรฐานสินค้าข้าวหอนมะลิไทย. ใน ราชกิจจานุเบกษา 115 (ตอน พิเศษ 154). หน้า 1-2.
- กล้านรงค์ ศรีรอด และเกื้อกูล ปิยะジョンขวัญ. 2546. เทคโนโลยีของแป้ง. พิมพ์ครั้งที่ 3. กรุงเทพฯ.
สำนักพิมพ์มหาวิทยาลัยเกษตรศาสตร์.
- เครื่อวัลย์ อัตตะวิริยะสุข. 2534. คุณภาพเมล็ดข้าวทางกายภาพและการแปรสภาพเมล็ด. กรุงเทพฯ.
ศูนย์วิจัยข้าวปทุมธานี สถาบันวิจัยข้าว กรมวิชาการเกษตร.
- งามชื่น คงเสรี. 2531. คุณภาพการหุงต้มรับประทานและการปั่นขี้ยที่เกี่ยวข้อง. ใน การปรับปรุงคุณภาพข้าว
สำหรับผู้ดำเนินธุรกิจโรงสี. หน้า 94-101. กรุงเทพฯ. สถาบันวิจัยข้าว กรมวิชาการ
เกษตร.
- ปราณี อ่านเปรื่อง. 2535. เอนไซม์ทางอาหาร ตอนที่ 1. หน้า 305. จุฬาลงกรณ์มหาวิทยาลัย.
กรุงเทพฯ.
- พันธ์จิต พัฒนากาย. 2541. เทคโนโลยีอาหารแห่งอนาคต high pressure processing. ว. สถาบัน
อาหาร. 5 : 42.
- มูลนิธิข้าวไทยในพระบรมราชูปถัมภ์. 2547. ความรู้เรื่องข้าว (ออนไลน์). สืบค้นจาก : <http://www.thairice.org> (7 กุมภาพันธ์ 2549)
- ลัดดาวัลย์ บรรณนุช. 2544. ข้าวเอกลักษณ์ของไทย “ข้าวหอนมะลิไทย”. ว. เกษตรก้าวหน้า. 13 :
16.
- สถาบันวิจัยข้าว. 2540. ความรู้เรื่องข้าว. ว. น.ส.พ. กสิกร. 70 : 277.
- สำนักงานเศรษฐกิจการเกษตร. 2547. การส่งออกข้าวไทย (ออนไลน์). สืบค้นจาก : <http://www.oae.go.th> (12 มิถุนายน 2547)
- อรอนงค์ นัยวิคุล. 2538. เคมีทางชั้นนำอาหาร. ภาควิชาวิทยาศาสตร์และเทคโนโลยีอาหาร คณะ
อุตสาหกรรมเกษตร มหาวิทยาลัยเกษตรศาสตร์.
- อันันต์ ผลวัฒนะ, สุเทพ นุชสวัสดิ์, ประภา ทองเสน, วิญญา วงศ์อุบล และบุญโญม ชำนาญกุล.
2535. การเจริญเติบโตและดัชนีการเก็บเกี่ยวของข้าวหอนที่ปลูกในช่วงแสงต่างๆกัน.
การสัมมนาทางวิชาการเรื่องข้าวและธัญพืชเมืองหนาวครั้งที่ 4 13-14 กุมภาพันธ์.
ศูนย์วิจัยข้าวพิมพ์โลก สถาบันวิจัยข้าว กรมวิชาการเกษตร. พิมพ์โลก. หน้า 222.

- Adair, C.B., Beachell, H.M., Jodon, N.E., Johnst, T.H., Thysell, J.R., Green, V.E., Webb, B.D. and Atkins, J.G. 1966. Rice breeding and methods in the United States. In Rice in the United States : varieties and production. p. 124. Agricultural Research Service. U.S. Department of Agriculture.
- Adom, K.K. and Liu, R.H. 2002. Antioxidant activity of grains. *J. Agric. Food Chem.* 50 : 6182-6187.
- Ahromrit, A., Ledward, D.A. and Niranjan, K. 2006. High pressure induced water uptake characteristics of Thai glutinous rice. *J. Food Eng.* 72 : 225-233.
- AOAC. 2002. Official Method of Analysis of the Association of Official Chemists. 17th ed. The Association of Official Agricultural Chemists. Virginia.
- Azhakanandam, K., Power, B., Lowe, K.C., Cocking, E.C., Tongdang, T., Jumel, K., Bligh, H.F.J., Harding, S.E. and Davey, M.R. 2000. Qualitative assessment of aromatic indica rice (*Oryza sativa, L.*) : proteins, lipids and starch in grain from somatic embryo- and seed-derived plants. *J. Plant. Phy.* 156 : 783-789.
- Barber, S. 1972. Milled rice and changes during aging. In Rice : Chemistry and Technology. (Houston, D.F., ed). p. 215-263. American Association of Cereal Chemists. St.Paul. Minnesota.
- Bauer, B.A. and Knorr, D. 2005. The impact of pressure, temperature and treatment time on starches : pressure-induced starch gelatinisation as pressure time temperature indicator for high hydrostatic pressure processing. *J. Food Eng.* 68 : 329-334.
- Bergman, C.J., Delgado, J.T., Bryant, R., Grimm, C., Cadwallader, K.R. and Webb, B.D. 2000. A rapid gas chromatographic technique for quantifying 2-acetyl-1-pyrroline and hexanal in rice (*Oryza sativa, L.*). *Cereal Chem.* 77 : 454-458.
- Bhattacharya, K.R. and Sowbhagya, C.M. 1971. Water uptake by rice during cooking. *Cereal Sci. Today.* 16 : 420-424.
- Biliaderis, C.G., Maurice, T.J., and Vose, j.R. 1980. Starch gelatinization phynomena studied by differential scanning calorimetry. *J. Food Sci.* 45 : 1669-1674.
- Biliaderis, C.G., Page, C.M., Slade, L. and Sirett, R.R. 1985. Thermal behavior of amylose-lipid complexes. *Carbohydr. Polym.* 5 : 367-389.

- Biliaderis, C.G., Page, C.M. and Maurice, T.J. 1986a. On the melting transitions of starch/monoglyceride systems. *Food Chem.* 22 : 279-295.
- Biliaderis, C.G., Page, C.M., Maurice, T.J. and Juliano, B.O. 1986b. Thermal characterization of rice starches : a polymeric approach to phase transitions of granular starch. *J. Agric. Food Chem.* 34 : 6-14.
- Biliaderis, C.G. and Galloway, G. 1989. Crystallization behavior of amylase-V complexes : structure-property relationships. *Carbohydr. Res.* 189 : 31-48.
- Biliaderis, C.G. and Senevirante, H.D. 1990. On the supermolecular structure and metastability of glycerol monostearate-amylose complex. *Carbohydr. Polym.* 13 : 185-206.
- Biliaderis, C.G., Tonogai, J.R., Perez, C.M. and Juliano, B.O. 1993. Thermal properties of milled rice starch as influenced by variety and parboiling method. *Cereal Chem.* 70 : 512-516.
- Blanshard, J.M.V. 1987. Starch granule structure and function : a physicochemical approach. In *Starch : property and potential*. 1st ed. (Galliard, T., ed). p. 16-54. John Wiley & Sons, Inc. Chichester. Great Britain.
- Blaszcak, W., Valverde, S. and Fornal, J. 2005. Effect of high pressure on the structure of potato starch. *Carbohydr. Polym.* 59 : 377-383.
- Bradford, M.M. 1976. A rapid and sensitive method for the quantitation of microgram quantities of protein utilizing the principle of protein-dye binding. *Anal. Biochem.* 76 : 248-254.
- Buttery, R.G., Ling, L.C. and Juliano, B.O. 1982. 2-Acetyl-1-pyrroline : important aroma component of cooked rice. *Chem. Ind.* 22 : 958-959.
- Buttery, R.G., Juliano, B.O. and Ling, L.C. 1983. Identification of rice aroma compound 2-acetyl-1-pyrroline in pandan leaves. *Chem. Ind. (London)*. 23 : 478.
- Buttery, R.G., Ling, L.C. and Mon, T.R. 1986. Quantitative analysis of 2-acetyl-1-pyrroline in rice. *J. Agric. Food Chem.* 34 : 112-114.
- Buttery, R.G., Turnbaugh, J.G. and Ling, L.C. 1988. Contribution of volatiles to rice aroma. *J. Agric. Food Chem.* 36 : 1006-1009.

- Champagne, E.T., Marshall, W.E. and Goynes, W.R. 1990. Effect of degree of milling and lipid removal on starch gelatinization in the brown rice kernel. *Cereal Chem.* 67 : 570-574.
- Cheftel, J.C. and Calioli, J. 1997. Effect of high pressure on meat : a review. *Meat sci.* 46 : 211-236.
- Chen, J. and Jane, J. 1994. Properties of granular cold-water-soluble starches prepared by alcoholic-alkaline treatments. *Cereal Chem.* 71 : 623-626.
- Cheng, F.M., Zhong, L.J., Wang, F. and Zhang, G.P. 2005. Differences in cooking and eating properties between chalky and translucent parts in rice grains. *Food Chem.* 90 : 39-46.
- Chung, H.J., Chang, H.I. and Lim, S.T. 2004. Physical aging of glassy normal and waxy rice starches : effect of crystallinity on glass transition and enthalpy relaxation. *Carbohydr. polym.* 58 : 101-107.
- Chungcharoen, A. and Lund, D.B. 1987. Influence of solutes and water on rice starch gelatinization. *Cereal Chem.* 64 : 240.
- Donovan, J.W. 1979. Phase transitions of the starch-water system. *Biopolymers.* 18 : 263-275.
- Donovan, J.W., Lorenz, K. and Kulp, K. 1983. Differential scanning calorimetry of heat-moisture treated wheat and potato starches. *Cereal Chem.* 60 : 381-387.
- Douzals, J.P., Marechal, P.A., Coquille, J.C. and Gervais, P. 1996. Microscopic study of starch gelatinization under high hydrostatic pressure. *J. Agric. Food Chem.* 44 : 1403-1408.
- Eliasson, A.C. 1992. A calorimetric investigation of the influence of sucrose on the gelatinization of starch. *Carbohydr. Polym.* 18 : 131.
- Ellis, R.P., Cochrane, M.P., Dale, M.F.B. 1998. Starch production and industrial use. *J. Sci. Food Agric.* 77 : 289-311.
- Endo, I., Chikubu, S. and Tani, T. 1977. Measurement of volatile carbonyl compounds in the vapour of cooked rice. *J. Jap. Soc. Food Sci. Technol.* 24 : 142-144.
- Escarpa, A., Gonzalez, M.C., Manas, E., Garcia-Diz, L. and Saura-Calixto, F. 1996. Resistant starch formation : standardization of a high-pressure autoclave process. *J. Agric. Food Chem.* 44 : 924-928.

- Evans, I.D. and Haisman, D.R. 1982. The effects of solutes on the gelatinization temperature range of potato starch. *Starch/Stärke.* 34 : 224-231.
- Ezaki, S. and Hayashi, R. 1992. High-pressure effects on starch : structural changes and retrogradation. *High Pressure and Biotechnol.* 224 : 163-165.
- Fang, L., Clausen, G. and fanger, P.O. 1999. Impact of temperature and humidity on chemical and sensory emissions from building materials. *Indoor Air.* 9 : 193-201.
- Farkas, D.C. and Hoover, D.G. 2000. High pressure processing-supplement : kinetics of microbial inactivation for alternative food processing technologies. *J. Food Sci.* 65 : 47-64.
- Fellows, P. 1990. High pressure processing. In *Food Processing Technology Principles and Practice.* p. 238. Ellis Horwood. London.
- Galloway, G.J., Biliaderis, C.G. and Stanley, D.W. 1989. Properties and structure of amylose-glycerol monostearate complexes formed in solution or on extrusion of wheat flour. *J. Food Sci.* 54 : 950-957.
- Gardner, H.W. 1988. Lipoxygenase pathways in cereals. In *Advances in Cereal Science and Technology.* Vol. 9. (Pomeranz, Y., ed). p. 161-215. American Association of Cereal Chemists. St.Paul. Minnesota.
- Gujral, H.S. and Kumar, V. 2003. Effect of accelerated aging on the physicochemical and textural properties of brown and milled rice. *J. Food Eng.* 59 : 117-121.
- Gunaratne, A. and Hoover, R. 2002. Effect of heat-moisture treatment on the structure and physicochemical properties of tuber and root starches. *Carbohydr. Polym.* 49 : 425-437.
- Hagenimana, A., Pu, P. and Ding, X. 2005. Study on thermal and rheological properties of native rice starches and their corresponding mixtures. *Food Res. Inter.* 38 : 257-266.
- Halick, J.V. and Kelly, V.J. 1959. Gelatinization and pasting characteristics of rice varieties as related to cooking behavior. *Cereal Chem.* 36 : 91-98.
- Hamaker, B.R. and Griffin, V.K. 1990. Changing the viscoelastic properties of cooked rice through protein disruption. *Cereal Chem.* 67 : 261-264.
- Hayakawa, T., Seo, S.W. and Igaue, I. 1980. Electron microscopic observation of rice grain. I. morphology of rice starch. *J. Jap. Soc. Starch. Sci.* 27 : 173-179.

- Hibi, Y., Kitamura, S. and Kuge, T. 1990. Effect of lipids on the retrogradation of cooked rice. *Cereal Chem.* 67 : 7-10.
- Hibi, Y., Matsumoto, T. and Hagiwara, S. 1993. Effect of high pressure on the crystalline structure of various starch granules. *Cereal Chem.* 70 : 671-676.
- Huang, R., Chang, W., Chang, Y. and Lii, C. 1994. Phase transitions of rice starch and flour gels. *Cereal Chem.* 71 : 202.
- Ida, S., Masaki, Y. and Morita, Y. 1983. The isolation of multiple forms and product specificity of rice lipoxygenase. *Agric. Biol. Chem.* 47 : 637-641.
- Indudhara Swamy, Y.M., Sowbhagya, C.M. and Bhattacharya, K.R. 1978. Changes in the physicochemical properties of rice with aging. *J. Sci. Food Agric.* 29 : 627-639.
- Iturriaga, L., Lopez, B. and Anon, M. 2004. Thermal and physicochemical characterization of seven argentine rice flours and starches. *Food Res. Inter.* 37 : 439-447.
- Jane, J., Chen, Y.Y., Lee, L.F., McPherson, A.E., Wong, K.S., Radosavljevic, M. 1999. Effect of amylopectin branch chain length and amylose content on the gelatinization and pasting properties of starch. *Cereal Chem.* 76 : 629-637.
- Jennings, P.R., Coffman, W.R. and Kauffman, H.E. 1979. Rice improvement. In Proc. Workshop on Chemical Aspects of Rice Grain Quality. p. 186. Int. Rice Res. Inst. Los Banos, Laguna. Philippines.
- Jezussek, M., Juliano, B.O. and Schieberle, P. 2002. Comparison of key aroma compounds in cooked brown rice varieties based on aroma extract dilution analyses. *J. Agric. Food Chem.* 50 : 1101-1105.
- Juliano, B.O. 1971. A simplified assay for milled-rice amylose. *Cereal Sci. Today.* 16 : 334-360.
- Juliano, B.O. 1972. The rice caryosis and its composition. In Rice : Chemistry and Technology. 2^{ed}. p. 10-74. American Association of Cereal Chemists. St.Paul. Minnesota.
- Juliano, B.O. 1979. Amylose analysis in rice-a review. In Proc. Workshop on Chemical Aspects of Rice Grain Quality. p. 251-260. Int. Rice Res. Inst. Los Banos, Laguna. Philippines.
- Juliano, B.O. 1982. An international survey of methods used for evaluation of the cooking and eating qualities of milled rice. In IRRI Research Paper Service 77. Int. Rice Res. Inst. Los Banos, Laguna. Philippines.

- Juliano, B.O. 1985. Rice : Chemistry and Technology. 2^{ed}. American Association of Cereal Chemists. St.Paul. Minnesota.
- Juliano, B.O., Onate, L.U. and Mundo, A.M.D. 1965. Relation of starch, protein content and gelatinization temperature to cooking and eating qualities of milled rice. J. Food Technol. 19 : 1006-1010.
- Juliano, B.O. and Perez, C.M. 1983. Major factors affecting cooked milled rice hardness and cooking time. J. Texture Stud. 14 : 235-243.
- Juliano, B.O. and Perez, C.M. 1984. Result of a collaborative test on the measurement of grain elongation of milled rice during cooking. J. Cereal Sci. 2 : 281-292.
- Katapo, H., Song, Y. and Jane, J.I. 2002. Effect and mechanism of ultrahigh hydrostatic pressure on the structure and properties of starches. Carbohydr. Polym. 47 : 233-244.
- Kato, T., Katayama, E., Matsubara, S., Omi, Y. and Matsuda, T. 2000. Release of allergenic proteins from rice grains induced by high hydrostatic pressure. J. Agric. Food Chem. 48 : 3124-3129.
- Kim, Y.J., Suzuki, T., Hagiwara, T., Yamaji, I. And Takai, R. 2001. Enthalpy relaxation and glass to rubber transition of amorphous potato starch formed by ball-milling. Carbohydr. Polym. 46 : 1-6.
- Kugimiya, M., Donovan, J.W. and Wong, R.Y. 1980. Phase transitions of amylose-lipid complexes in starches : a calorimetric study. Starch/Stärke. 32 : 265-270.
- Kugimiya, M. and Donovan, J.W. 1981. Calorimetric determination of the amylose content of starches based on formation and melting of the amylose-lysolecithin complex. J. Food Sci. 46 : 765-777.
- Laksanalamai, V. and Ilanganlileke, S. 1993. Comparison of aroma compound (2-acetyl-1-pyrroline) in leaves from Pandan (*Pandanus amaryllifolius*) and Thai fragrant rice (Khao Dawk Mali-105). Cereal. Chem. 70 : 381-384.
- Little, R.R. and Dawson, E.H. 1960. Histology and histochemistry of raw and cooked rice kernels. Food Res. 25 : 611-622.
- Lu, S. and Luh, B.S. 1991. Properties of the rice caryopsis. In Rice Production. 1st ed. (Luh, B.S., ed). p. 389-419. Van Nostran Reinhold. New York.

- Lugay, J.C. and Juliano, B.O. 1965. Crystallinity of rice starch and its fractions in relation to gelatinization and pasting characteristics. Int. Rice Res. Inst. Los Banos, Laguna. Philippines.
- Mano, Y., Kawaminami, K., Kojima, M., Ohnishi, M. and Ito, S. 1999. Comparative composition of brown rice lipids (lipid fractions) of indica and japonica rices. Biosci. Biotechnol. Biochem. 63 : 619-626.
- Maga, J.A. 1984. Rice product volatiles : a review. J. Agric. Food Chem. 32 : 964-970.
- Mahatheeranont, S., Promdang, S. and Jeampirikul, A. 1995. Volatile aroma compounds of Khao Dawk Mali 105 rice. J. Kasetsart (Nat Sci). 29 : 508-514.
- Mahatheeranont, S., Keawsa-ard, S. and Dumri, K. 2001. Quantification of the rice aroma compound, 2-acetyl-1-pyrroline, in uncooked Khao Dawk Mali 105 brown rice. J. Agric. Food Chem. 49 : 773-779.
- Marshall, W.E., Normand, F.L. and Goynes, W.R. 1990. Effects of lipid and protein removal on starch gelatinization in whole grain milled rice. Cereal Chem. 67 : 458-463.
- Marshall, W.E. 1992. Effect of degree of milling of brown rice and particle size of milled rice on starch gelatinization. Cereal Chem. 69 : 632-636.
- Mertens, B. 1995. Hydrostatic pressure treatment of food : equipment and processing. In New Method of Food Preservation. (Gould, G.W., ed). p. 135-158. Chapman and Hall. Great Britain.
- Meullenet, J.F., Marks, B.P., Hankins, J.A., Griffin, V.K. and Daniels, M.J. 2000. Sensory quality of cooked long grain rice as affected by rough rice moisture content, storage temperature and storage duration. Cereal Chem. 77 : 259-263.
- Mod, R.R., Conkerton, E.J., Chapital, D.C. and Yatsu, L.Y. 1983. Rice phenolic acids and their changes with aging. Cereal Foods World. 28 : 560.
- Moritaka, S. and Yasumatsu, K. 1972. Studies on cereals and the effects of sulphydryl groups on storage deterioration of milled rice. Eiyo To Shokuryo. 25 : 59-62.
- Morrison, W.R. 1993. Biosynthesis, interactions and manipulation. In Seed Storage Compound. (Shewry, P.R. and Stobart, K., eds). p. 175-190. Oxford University Press. Great Britain.

- Morrison, W.R., Tester, R.F., Snape, C.E., Law, R. and Gidley, M.J. 1993. Swelling and gelatinization of cereal starches. IV. Some effects of lipid-complexed amylose and free amylose in waxy and normal barley starches. *Cereal Chem.* 70 : 385-391.
- Noosuk, P., Hill, S.E., Pradipasena, P. and Mitchell, J.R. 2003. Structure-viscosity relationship for Thai rice starches. *Starch/Stärke.* 55 : 337-344.
- Normand, F.L. and Marshall, W.E. 1989. Differential scanning calorimetry of whole grain milled rice and milled rice flour. *Cereal Chem.* 66 : 317-320.
- Okabe, M. 1979. Texture measurement of cooked rice and its relationship to the eating quality. *J. Texture Stud.* 10 : 131-152.
- Ong, M.H. and Blanshard, J.M.V. 1995. Texture determinants in cooked, parboiled rice. I : rice starch amylose and the fine structure of amylopectin. *J. Cereal Sci.* 21 : 251-260.
- Ory, R.L. and Flick, G.J. 1992. Off-flavors on rice and rice products. In *Off-Flavors in Foods and Beverages.* (Charalambous, G., ed). p. 77-102. Elsevier Science Publishers BV. Amsterdam.
- Palou, E., Malo, L.A., Gustavo, V., Barbosa, C. and Swanson, B.G. 1999. High-pressure treatment in food preservation. In *Food Preservation.* (Rahman, M.S., ed.). p. 533-576. Marcel and Dekker, Inc. New York.
- Pelayo, C., Ebeler, S.E. and Kader, A.A. 2003. Postharvest life and flavor quality of three strawberry cultivars kept at 5 °C in air or air + 20 kPa CO₂. *Postharv. Biol. Technol.* 27 : 171-183.
- Petrov, M., Danzart, M., Giampaoli, P., Faure, J. and Richard, H. 1996. Rice aroma analysis : discrimination between a scented and non-scented rice. *Sciences Des Aliments.* 16 : 347-360.
- Pomeranz, Y. 1987. *Modern Cereal Science and Technology.* VCH Publ., Inc. New York.
- Pomeranz, Y. 1992. Biochemical, functional and nutritive changes during storage. In *Storage of Cereal Grains and their Products.* 4th ed. (Sauer, D.B., ed). p. 55-141. American Association of Cereal Chemists. St.Paul. Minnesota.

- Rivenburgh, D.V. 1961. Analysis of selected varieties and grades of rice moving in world trade.
In Terms of U.S. official rice standards. p. 40. U.S. Department of Agriculture.
 Foreign Agricultural Service Marketing Research.
- Rubens, P. and Heremans, K. 2000. Pressure-temperature gelatinization phase diagram of starch :
 an *in situ* fourier transform infrared study. *Biopolymers.* 54 : 524-530.
- Russell, P.L. and Juliano, B.O. 1983. Differential scanning calorimetry of rice starches.
Starch/Stärke. 35 : 382-386.
- Sanchez, T.E. and Raymundo, L.C. 1991. The lipoxygenase activity of aromatic rice. *The Philippine Agriculturist.* 74 : 79-87.
- Sandeep, B. and Hanna, A.M. 1994. Amylose-lipid complex formation during single-screw extrusion of various corn starches. *Cereal Chem.* 71 : 582-587.
- Sanders, J.P.M. 1996. Starch manufacturing in the world. *In Advanced Post Academic Course on Tapioca Starch Technology.* AIT Center, Bangkok.
- Sasaki, T., Yasui, T., and Matsuki, J. 2000. Effect of amylose content on gelatinization, retrogradation and pasting properties of starches from waxy and non-waxy wheat and their F1 seeds. *Cereal Chem.* 77 : 58-63.
- Semwal, A.D., Sharma, G.K. and Arya, S.S. 1996. Flavour degradation in dehydrated convenience foods : changes in carbonyls in quick-cooking rice and Bengalgram *dhal.* *Food Chem.* 57 : 233-239.
- Sharp, R.N. and Timme, L.K. 1986. Effect of storage time, storage temperature and packaging method on shelf life of brown rice. *Cereal Chem.* 63 : 247-251.
- Shin, M.G., Yoon, S.H., Rhee, J.H. and Kwon, T.W. 1986. Correlation between oxidative deterioration of unsaturated lipid and n-hexanal during storage of brown rice. *J. Food Sci.* 51 : 460-463.
- Siebenmorgen, T.J. 1998. Influence of postharvest processing on rice quality. *Cereal Food World.* 43 : 200-206.
- Singh, S., Dhaliwal, Y.S., Nagi, H.P.S. and Kalia, M. 1998. Quality characteristics of six rice varieties of Himachal Pradesh. *J. Food Sci. Tech.* 35 : 74-78.

- Singh, N., Sodhi, N.S., Kaur, M. and Saxena, S.K. 2003. Physico-chemical, morphological, thermal, cooking and textural properties of chalky and translucent rice kernels. *Food Chem.* 82 : 433-439.
- Singh, N., Kaur, L., Sodhi, N.S. and Sekhon, K.S. 2005. Physicochemical, cooking and textural properties of milled rice from different Indian rice cultivars. *Food Chem.* 89 : 253-259.
- Slade, L. 1984. Starch properties of processed foods : staling of starch based production. *Proceedings of the 69th American Association of Cereal Chemists Annual Meeting.* Abstract 112. Minneapolis.
- Slute, R., Klingler, R.W., Boguslawski, S., Eshtiaghi, M.N. and Knorr, D. 1996. Effects of high pressures treatment on starches. *Starch/Stärke.* 48 : 399-408.
- Smith, R.J. 1979. *Food Carbohydrate.* p. 416. Avi Publ. Co., Inc. Westport.
- Sowbhagya, C.M. and Bhattacharya, K.R. 1976. Lipid autoxidation in rice. *J. Food Sci.* 41 : 1018-1023.
- Spadaro, J.J., Matthews, J. and Wadsworth, J.T. 1980. Milling. In *Rice Production and Utilization.* (Luh, B.S. ed.). p. 360-402. Avi Publ. Co., Inc. Westport.
- Sujatha, S.J., Ahmad, R. and Bhat, P.R. 2004. Physicochemical properties and cooking qualities of two varieties of raw and parboiled rice cultivated in the coastal region of Dakshina Kannada, India. *Food Chem.* 86 : 211-216.
- Suzuki, Y., Ise, K., Li, C., Honda, I., Iwai, Y. and Matsukura, U. 1999. Volatile components in stored rice (*Oryza sativa, L.*) of varieties with and without lipoxygenase-3 in seeds. *J. Agric. Food Chem.* 47 : 1119-1124.
- Swinkel, J.J.M. 1985. Composition and properties of commercial native starches. *Starch/Stärke.* 37 : 1-5.
- Steel, R.D.D. and Torrie, J.H. 1980. *Principles and Procedures of Statistic : A Biomaterial Approach.* 2nd ed. p. 862. McGraw-Hill, Inc. New Delhi.
- Suprasanna, P., Ganapathi, T.R., Ramaswamy, N.K., Surendranathan, K.K. and Rao, P.S. 1998. Aroma synthesis in cell and callus cultures of rice. *Rice Genet. Newslett.* 15 : 123-125.

- Teo, C.H., Karim, A.A., Cheah, P.B., Norziah, M.H. and Seow, C.C. 2000. On the roles of protein and starch in the aging of non-waxy rice flour. *Food Chem.* 69 : 229-236.
- Theerakulkait, C. and Barrett. 1995. Partial purification and characterization of sweet corn germ lipoxygenase. *J. Food Biochem.* 18 : 355-372.
- Tsugita, T., Kurata, T. Kato, H. 1980. Volatile components after cooking rice milled to different degree. *Agric. Biol. Chem.* 44 : 835-840.
- Vandeputte, G.E., Vermeylen, R., Geeroms, J. and Delcour, J.A. 2003. Rice starches. I. structural aspects provide insight into crystallinity characteristics and gelatinization behaviour of granular starch. *J. Cereal Sci.* 38 : 43-52.
- Vick, B.A. and Zimmerman, D.C. 1987. Oxidative systems for modification of fatty acids : the lipoxygenase pathway. In *The Biochemistry of Plants*. p. 53-59. Academic Press, Inc. New York.
- Vidyasagar, K., Premavalli, K.S. and Arya, S.S. 1991. Effect of oils and packaging materials on the storage stability of insta nutro cereal mix. *Indian Food Packer.* 45 : 24-32.
- Villareal, R.M., Resurreccion, A.P., Suzuki, L.B. and Juliano, B.O. 1976. Changes in the physicochemical properties of rice during storage. *Starch/Stärke.* 28 : 88-94.
- Watanabe, M., Arai, E., Honma, K. and Fuke, S. 1991. Improving the cooking properties of aged rice grains by pressurization and enzymatic treatment. *Agric. Biol. Chem.* 55 : 2725-2731.
- Widjaja, R., Craske, J.D. and Wooton, M. 1996a. Comparative studies on volatile components of non-fragrant and fragrant rices. *J. Sci. Food Agric.* 70 : 151-156.
- Widjaja, R., Craske, J.D. and Wooton, M. 1996b. Changes in volatile components of paddy, brown and white fragrant rice during storage. *J. Sci. Food Agric.* 71 : 218-224.
- Wongpornchai, S., Dumri, K., Jongkaewwattana, S. and Siri, B. 2004. Effects of drying methods and storage time on the aroma and milling quality of rice (*Oryza sativa L.*) cv. Khao Dawk Mali 105. *Food Chem.* 87 : 407-414.
- Yajima, I., Yanai, T., Nakamura, M., Sakakibara, H. and Hayashi, K. 1979. Volatile flavor compounds of cooked Kaorimaki. *Agric. Biol. Chem.* 43 : 2425-2429.
- Yanai, S., Ishitani, T. and Kojo, T. 1979. Influence of gaseous environment on the hermetic storage of milled rice. *Nippon Shokuhin Kogyo Gakkaishi.* 26 : 145-150.

- Yasumatzu, K., Moritaka, S. and Wada, S. 1966. Studies on cereals. V. stale flavor of stored rice. *Agric. Biol. Chem.* 30 : 483-486.
- Yoshihashi, T. 2002. Quantitative analysis on 2-acetyl-1-pyrroline of an aromatic rice by stable isotope dilution method and model studies on its formation during cooking. *Food Chem. Toxicol.* 67 : 619-622.
- Yoshihashi, T., Hong, N.T.T. and Inatomi, H. 2002. Precursors of 2-acetyl-1-pyrroline, a potent flavor compound of aromatic rice variety. *J. Agric. Food Chem.* 50 : 2001-2004.
- Yoshihashi, T., Nguyen, T. and Kabaki, N. 2004. Area dependency of 2-acetyl-1-pyrroline content in aromatic rice variety, Khao Dawk Mali 105. *JARQ.* 38 : 105-109.
- Yoshihashi, T., Nguyen, T., Surojanametakul, V., Tungtrakul, P. and Warunee, V. 2005. Effect of storage conditions on 2-acetyl-1-pyrroline content in aromatic rice variety, Khao Dawk Mali 105. *J. Food Sci.* 70 : 534-537.
- Zhou, Z., Robards, K., Helliwell, S. and Blanchard, C. 2002a. Aging of stored rice : changes in chemical and physical attributes. *J. Cereal Sci.* 35 : 65-78.
- Zhou, Z., Robards, K., Helliwell, S. and Blanchard, C. 2002b. Review : composition and functional properties of rice. *Inter. J. Food Sci. Technol.* 37 : 849-868.
- Zobel, H.F. 1964. X-ray analysis of starch granules. *In Methods in Carbohydrate Chemistry.* (Whistler, R. L., ed). p. 109-113. Academic Press, Inc. New York.
- Zobel, H.F.S., Young, S.N. and Rocca, L.A. 1988. Starch gelatinization : an X-ray diffraction study. *Cereal Chem.* 65 : 443-446.