Takahisa Nishizu, PhD

1966, Aug, 18, Kyoto

Present Position and address

Professor, Food Engineering

Applied Biological Sciences

Gifu University, 1-1, Yanagido, Gifu JAPAN

Member, Science Council of Japan

Nationality JAPANESE

Education

1987 Bc (Agricultural Science) Kyoto University, Agricultural Engineering

2002 PhD Kyoto University

Professional Appointment

Food Engineering, Applied Biological Sciences, Gifu University

1990, Apr - Assistant Professor, Kyoto University

2008, Apr -Associate Professor, Gifu University

2014, Mar -Professor, Gifu University

Award

1994 ARMAND BLANC Prize (CIGR International Commission of Agricultural and
Biosystems Engineering)

2012 Research Award (Kansai Branch in Japanese Society of Agricultural Machinery
and Food Engineers)

Scientific/Administration Responsibility (Current; Oct, 2014)

Councilor; Japanese Society of Agricultural Machinery and Food Engineers
Japanese Society for Food Science and Technology (Chubu Branch)

Editorial Boards

Engineering in Agriculture, Environment and Food (Editor-in-Chief)

Bioscience, Biotechnology, and Biochemistry (Associate Ediotor)

Research interest

Food Physics and Physical Chemistry; focusing on controls of physicochemical and
textural properties of food materials

Major publications

1. I Wayan Budiastra, Ikeda, Y. and Nishizu, T.: Optical Methods for Quality Evaluation of Fruits (Part 1) -Optical properties of selected fruits using the Kubelka-Munk theory and their relationships with fruit maturity and sugar content-, Journal of JSAM, 60(2), 117-128, 1998.

2. I Wayan Budiastra, Ikeda, Y. and Nishizu, T.: Optical methods for quality evaluation of fruits (Part 2) -prediction of individual sugars and malic acid concentrations of apples and mangoes by the Developed NIR Reflectance System-, Journal of JSAM, 60(3), 117-127, 1998.

3. I Wayan Budiastra, Ikeda, Y. and Nishizu, T.: Optical Methods for Quality Evaluation of Fruits (Part 3) -Relationships between optical density, slopes of the optical density distribution of fruits and fruit firmness-, Journal of JSAM, 60(4), 63-71, 1998.

4. Nishizu, T., Ikeda, Y., Torikata, Y., Manmoto, S., Umehara, T. and Mizukami, T.: Automatic, continuous food volume measurement with a Helmholtz resonator, the CIGR Journal of Scientific Research and Development, 3, FP 01 004, 2001.

5. Nakano, A., Torikata, Y., Yamashita, T. and Nishizu, T., Helmholtz resonance technique for measuring liquid volume under micro-gravity conditions, Microgravity Science and Technology, XVII-3, 65-70, 2005.

6. Nakano, A., Torikata, Y., Yamashita, T., Sakamoto, T., Futaya, Y., Tateno, A. and Nishizu, T.: Liquid volume measurement with a closed Helmholtz resonator under micro-gravity conditions, Cryogenics, 46, 126-131, 2006.

7. Nishizu, T., Torikata, Y., Yamashita, T., Sakamoto, T., Futaya, Y., Tateno, A. and Nakano, A.: Liquid volume measurement for cryogen under micro-gravity condition, Microgravity Science and Technology, XVIII-3/4, 190-195, 2006.

8. Nishizu, T. and Kawada, S.: Volume measurement by using Helmholtz acoustic resonance for porous produce and foods -- real-time measurement of bread dough volume in fermentation process --, Key Engineering Materials, Vols. 321-323, 1151-1156, 2006.

9. Kim, H., Ko, H., Kim, K., Kato, K., kita, Y. and Nishizu, T.: Determination of egg freshness and internal quality measurement using image analysis, Journal of Biosystems Engineering, 32(3), 166-172, 2007.

10. Shiigi, T., Kondo, N., Ninomiya, K., Kurita, M., Nishi, T., Namba, K., Shimizu, H. and Nishizu, T.: Construction of virtual low-noise space in noisy agricultural

facility for safety and comfort, Engineering in Agriculture, Environment and Food, 1(2), 77-83, 2008.

11. Kondo, N., Kuramoto, M., Shimizu, H., Ogawa, Y., Kurita, M., Nishizu, T., Chong, V.K. and Yamamoto, K.: Identification of fluorescent substance in mandarin orange skin for machine vision system to detect rotten citrus fruits, Engineering in Agriculture, Environment and Food, 2(2), 54-59, 2008.

12. Kondo, N., Yamamoto, K., Shimizu, H., Yata, K., Kurita, M., Shiigi, T., Monta, M. and Nishizu, T.: A machine vision system for tomato cluster harvesting robot, Engineering in Agriculture, Environment and Food, 2(2), 60-65, 2008.

13. Shimizu, H., Ma, Z., Chong, V.K., Nishizu, T. and Kondo, N.: Machine vision system for plant morphogenesis analysis, Environment control in biology, 46(4), 221-231, 2008.

14. Kurita, M., Kondo, N., Shimizu, H., Ling, P., Falzea, P.D., Shiigi, T., Ninomiya, K., Nishizu T. and Yamamoto, K.: A double image acquisition system with visible and UVLEDs for citrus fruit, Journal of Robotics and Mechatronics, 21(4), 533-540, 2009.

15. Nakano, A., Yamashita, T., Inoue, C., Himeno, T. and Nishizu, T.: Experimental study on capillary flow in intricate vane-wall geometry under micro-gravity conditions, Journal of the Japan Society of Microgravity Application, 26(3), 197-203, 2009.

16. M. Aboonajmi, Akram, A., Nishizu, T., Kondo, N., Setarehdan, S.K. and Rajabipour, A., An ultrasound based technique for the determination of poultry egg quality, Res. Agr. Eng., 56(1), 26-32, 2010.

17. Ko, H.J, Kim, K.Y., Min, Y.B., Nishizu, T., Yun, Y.C. and Kim, H.T., Effect of light transmission on composition and somatic cell count of raw milk, Journal of Agriculture & Life Science, 46(1), 189-194, 2012.

18. Zhang, L., Nishizu, T., Hayakawa, S., Nakashima, R., Goto, K., Effects of different drying conditions on water absorption and gelatinization properties of pasta. Food Bioprocess Technolgy, DOI 10.1007/s11947-012-0976-5, 2012.

19. Zhang, L., Nishizu, T., Kishigami, H., Kato, A., Goto, K., Measurement of internal shrinkage distribution in spaghetti during drying by X-ray µCT. Food Research International, 51, 180–187, 2013.

20. Matsumiya, K., Inoue, T., Niida, J., Katagiri, T., Nishizu, T., Matsumura, Y., Evaluation of long-term stability of milk beverages by a novel method for rapid determination of aggregation forces between colloidal particles, Food Hydrocolloids, 34, 177-183, 2012.

21. Aboonajmi, M., Setarehdan, S.K., Akram, A., Nishizu, T., Kondo, N., Prediction of poultry egg freshness using ultrasound, International journal of food properties, 17(9), 1889-1899, 2014.

22. Nguyen Thi Huong Lan, Nishizu, T., Iida, Y., Katsumata, A., Hasegawa, N., Kitaori, N., Lifen Zhang, Inukai, A., Goto, K., Melt-in-mouth textures of baked flour products and their compression deformations between the tongue and palate, Journal of Japanese Society of Taste Technology, 12(1), 10-15, 2013.

23. Nguyen Thi Huong Lan, Nishizu, T., Shibata, M., Goto, K., The effects of starch retrogradation on the "melt-in-mouth" sensory characteristics of bread, Journal of Japanese Society of Taste Technology, 13(1), 5-12, 2014.

24. Katsuno, N., Sakamoto, C., Yabe, T., Yamauchi, R., Nishizu, T., Kato, K. : Methods for enrichment of γ-aminobutyric acid in sesame seeds, Food Science and Technology Research, 21(6), 787-791, 2015.

25. Yuno-Ohta, N., Kato, T., Ashizawa, S., Kimura, Y., Maruyama, N., Nishizu, T. : Role of ovomucoid in the gelation of a β-lactoglobulin-ovomucoid mixture, Colloid and Polymer Science, 294(6), 1065-1073, 2016.

26. Nakano, A., Nishizu, T.: Experimental study of liquid level gauge for liquid hydrogen using Helmholtz resonance technique, Cryogenics, 77, 43-48, 2016.