

Different types of Nucleic Acids?

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Abstract (limit 600 words)

Because of the growing demand for high-quality foods, we've had to adapt and implement new automated technologies to reduce waste and improve the nutritional and sensory quality of processed foods. The emerging area of laser-based technology has shown significant potential to enhance the quality and safety of foods due to the better monochromaticity and directivity of laser beams. Base on the applications of lasers in food packaging and food detection, laser-assisted food processing is a growing area arousing considerable interest among scientists in the past decade. This review examines relevant material in order to assess the possibilities of laser technology in food processing. From the standpoint of both laser and food material qualities, the key to the success of laser-assisted food processing is outlined and studied. Aspects of the processing mechanism and use of laser technology are examined. The corresponding issues and future opportunities for laser-assisted food processing, as well as research and development requirements, are reviewed. Lasers have a lot of promise in the field of food processing, such as material pretreatment, drying, cooking, microbial suppression, laser marking, extraction, fermentation, and ageing of liquid meals, among other things.

Important of research (limit 200 words)

The current review looked at some of the current and future applications of PEF in the food business. Consumer demand for fresh-like products with high nutritional value, as well as demand for food produced using environmentally friendly methods, are driving the development of new food processing technologies. PEF is a technique that employs high-voltage amplitude electric waves. The product placed between the electrodes in the chamber receives short electrical impulses (ranging from microseconds to milliseconds) of high voltage (usually 10–80 kV/cm). This technology can be used alone or in combination with other methods to obtain products in more energy efficient (e.g. by lowering temperature and time of extraction) and environmentally friendly way.

Biography (limit 200 words)

He is a Research Plant Physiologist in the Crop Genetics Research Unit at USDA-ARS in Stoneville, Mississippi. In 1989, he got his PhD in Plant Nutrition from the University of Leeds' Department of Pure and Applied Biology. He joined USDA-ARS in 2004 as a Research Plant Physiologist working on identifying the physiological and genetic mechanisms controlling soybean seed composition and mineral nutrition constituents (protein, oil, fatty acids, sugars, phytohormones, and mineral nutrition) under drought, heat, and disease pressure.

Information of Institute (limit 200 words)

The University of Life Sciences in Lublin (Polish: Uniwersytet Przyrodniczy w Lublinie) is a multi-profile higher education institution, which integrates a wide range of agricultural, biological, veterinary, technical and socioeconomic sciences in Poland. Although the university was established in 1955, its history stems back to 1944 with the creation of the Agrarian and Veterinary Faculties within the new Maria Curie-Skłodowska University (UMCS). In 1955, these two faculties, together with the Faculty of Zootechnics (est. 1953), were spun off to create a new



institution, originally called the Lublin Higher School of Agriculture. It was called the Lublin Agricultural Academy from 1972, and took its present name.

References

1. Aadil RM, Zeng X-A, Han Z, et al. Combined effects of pulsed electric field and ultrasound on bioactive compounds and microbial quality of grapefruit juice. *J Food Process Preserv.* 2018;42:e13507.
2. Ade-Omowaye BIO, Angersbach A, Taiwoy KA, Knorr D. Use of pulsed electric field pretreatment to improve dehydration characteristics of plant based foods. *Trends Food Sci Technol.* 2001;12:285–295.
3. Agcam E, Akyildiz A, Evrendilek GA. Comparison of phenolic compounds of orange juice processed by pulsed electric fields (PEF) and conventional thermal pasteurisation. *Food Chem.* 2014;143:354–361.
4. Alam M, Lyng J, Frontuto D, Marra F, Cinquanta L. Effect of pulsed electric field pretreatment on drying kinetics, color, and texture of parsnip and carrot. *J Food Sci.* 2018;83:2159–2166.
5. Al-Sayed L, Boy V, Madieta E, Mehinagic E, Lanoisellé J-L (2018) Pulsed electric fields (PEF) as pre-treatment for freeze-drying of plant tissues. In: *IDS'2018—21st international drying symposium València, Spain, 11–14 September 2018*
6. Andreou V, Dimopoulos G, Alexandrakis Z, Katsaros G, Oikonomou D, Toepfl S, Heinz V, Taoukis P. Shelf-life evaluation of virgin olive oil extracted from olives subjected to nonthermal pretreatments for yield increase. *Innov Food Sci Emerg Technol.* 2017;40:52–57.
7. Andreou V, Dimopoulos G, Dermesonlouoglou E, Taoukis P. Application of pulsed electric fields to improve product yield and waste valorization in industrial tomato processing. *J Food Eng.* 2020;270:109778.
8. Barba FJ, Parniakov O, Pereira SA, Wiktor A, Grimi N, Boussetta N, Saraiva JA, Rasoe J, Martin-Belloso O, Witrowa-Rajchert D, Lebovka N, Vorobiev E. Current applications and new opportunities for the use of pulsed electric fields in food science and industry. *Food Res Int.* 2015;77:773–798.
9. Barbosa-Canovas G, Tapia MS, Cano MP. *Novel food processing technologies.* New York: CRC Press; 2004.
10. Ben Ammar J, Van Hecke E, Lebovka N, Vorobiev E, Lanoisellé JL (2011) Freezing and freeze-drying of vegetables: benefits of a pulsed electric fields pre-treatment. in: *CIGR section VI international symposium on towards a sustainable food chain food process, bioprocessing and food quality management. Nantes, France—April 18–20, 2011*

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