

## **CURRICULUM VITAE**

### **Prof. Dr. Kezban Candođan**

**Academic Title** : Professor  
**State of Education** : Doctor of Philosophy  
**Institution** : Ankara University

#### **Biographical Sketch**

Kezban Candođan is a Professor of Food Engineering at Ankara University, Turkey. She received her B.S. and M.S. degrees from Ankara University and her Ph.D. from Clemson University, USA. Her M.S. research was on poultry meat processing, whereas her doctoral work was on fermented sausage processing. In 2001, she joined the Food Engineering Department, Ankara University, as a postdoctoral fellow. She was promoted to Associate Professor in 2003 and to Full Professor in 2009. She is a certified evaluator for MÜDEK (Turkish Association for Evaluation and Accreditation of Engineering Programs) and for Quality Evaluation Agency of YÖK (Council of Higher Education in Turkey). She is also a scientific consultant for the Turkish food industry and is a scientific advisory committee member for SETBİR (Union of Dairy, Meat, Food Processors and Producers of Turkey). Professor Candođan's current research interests include active packaging of muscle foods, development of functional and new meat products, characterization of PSE meats in poultry processing plants, detection of meat adulteration, and 3D printing of muscle based foods.

#### **Educational Background**

- Ph.D. in Food Technology, Clemson University, Clemson, SC, U.S.A. (2000). Dissertation topic: Bacterial Starter Cultures, Aging and Fermentation Effects on Some Characteristics of Fermented Beef Sausages. Advisor: Prof. Dr. J.C. Acton.
- M.S. in Food Science and Technology, Ankara University, Ankara-TURKEY (1992). Dissertation topic: Effect of Potassium Sorbate and Lactic Acid on the Shelf-Life of Vacuum Packaged Chicken Meats. Advisor: Prof. Dr. Nuray Kolsarıcı.
- B.S. in Food Science and Technology, Ankara University, Ankara-TURKEY (1989).

#### **Honors, Awards and Distinctions**

- Ankara University, Science Encouragement Award (1995-1996)
- Scholarship for the course titled "Food Processing-Quality Assurance and Marketing in Food Processing Enterprises" in "İnternational Agricultural Center"da (IAC), Wageningen, Holland, (1995)
- Ph.D. Scholarship by High Educational Council, (1997-2000)
- Alpha Epsilon Lambda Honor Society of Clemson University, (2000)
- TÜBİTAK 1001 Program, Project Performance Award, 2020.

## **Professional Experience**

- Professor, Ankara University, 2009-
- Associate Professor, Ankara University, 2003-2009.
- Post Doctoral Fellow, Ankara University, 2001-2003.
- Graduate Research Assistant, Clemson University, 1997-2000.
- Graduate Research/Teaching Assistant, Ankara University, 1990-1997.

## **Research Interests**

- Meat and poultry processing, Meat and poultry product development, Improvement of the quality of the meat products. Novel technologies on muscle foods, Active packaging of muscle foods, Sensory analyses, Food ethics, 3D printing of muscle foods.

## **Courses Taught**

### **Undergraduate**

GM406 Meat Technology  
GM311 Sensory Analyses  
GM315 Physical Properties of Foods  
GM420 Food and Business Ethics  
FDE406 Food Quality Control

### **Graduate**

809627 Selected Topics  
809503 Production Faults in Meat Technology  
809555 New Product Development for the Food Industry

## **Administrative Duties**

Vice Department Chair, 2008-2010  
Member of Board of Directors at Graduate School of Applied Sciences, 2019-  
Member of Board at Faculty of Engineering, 2019-

## **Other Duties**

Mentor in Technology Management Certificate Program (Faculty of Engineering, Ankara University, 2007-2008)

Organizing Committee in “Food Politics” Panel, Association of Food Engineers, Turkey, 2008

Organizing Committee in the Second Student Competition on Product Development, GaziOsmanPaşa University, Tokat, 2009

Advisory scientific committee member, SETBIR (Union of Dairy, Meat, Food Industrialists and Producers of Turkey), 2011 to date

Trained evaluator, MÜDEK (Association for Evaluation and Accreditation of Engineering Programs in Turkey), 2012 to date

Trainer in Food Engineer Court Experts Program in “Food Ethics”, Association of Food Engineers, Turkey, 2012 to date

Scientific Committee in “Second International Poultry Meat Congress”, BESDBIR (Poultry Meat Producers & Breeders Association), 2013

Scientific Committee in “59th International Congress of Meat Science and Technology- ICoMST 2013, İzmir, Turkey

Editorial Board of Food Engineering Reviews, Springer, 2013 to date

Editorial Board of Journal of Agricultural Sciences, 2014

Scientific Committee in “Third International Poultry Meat Congress”, BESDBIR (Poultry Meat Producers & Breeders Association), 2015

Scientific Committee in “Fourth International Poultry Meat Congress”, BESDBIR (Poultry Meat Producers & Breeders Association), 2017

Scientific Committee in 2nd International Gazi Pharma Symposium Series, GPSS-2017, Ankara

Scientific Committee in 1st International Agricultural and Food Ethics Congress, Ankara, 2017

Scientific Committee in IFT-EFFoST2018 International Nonthermal Processing Workshop and Short Course. September 25-27, Sorrento-Salerno, Italy

Scientific Committee in International Poultry Science Congress of WPSA Turkish Branch’2018, Kapadokya

Scientific Committee in “Fifth International Poultry Meat Congress”, BESDBIR (Poultry Meat Producers & Breeders Association), 2019

Scientific Committee in 2nd International Agricultural and Food Ethics Congress, İzmir, 2019

Scientific Committee in IV. Workshop in Meat Products. Kuşadası, March 2020

### **Fellowships and Memberships**

Association of Food Technologists in Turkey, International Union of Food Science and Technology, Institute of Food Technologists, Global Harmonization Initiative

### **Projects**

Production of Functional Food Products for People with Dysphagia Using A Three Dimensional (3D) Food Printer, TÜBİTAK PROJECT, Principle Investigator, 15.02.2019-

Species Identification of Raw Meat Mixtures Using Fourier Transform Infrared Spectroscopy (FT-IR), TÜBİTAK PROJECT, Principle Investigator, 15/05/2015-15/11/2017.

Effect of Carrageenan and Potassium Chloride on Some Characteristics of Reduced-Salt Chicken Myofibrillar Protein Gels, Ankara University BAP Project, Principle Investigator, Ankara University BAP Project, 10/06/2014 - 11/02/2016.

Changes in Sarcoplasmic and Myofibrillar Proteins of Microwave Cooked Chicken Meats, , Principle Investigator, Ankara University BAP Project 15/05/2015 - 27/10/2016.

Production of Chicken Gelatin for Industrial Use, Turkish Ministry of Science, Industry and Technology Programs. Techno Entrepreneurship Program Project. Consultant, 01/12/2015 - 13/10/2016.

Quality Changes in Chicken Meats Packaged under Modified Atmosphere Incorporated with Oxygen Scavengers. Principle Investigator, Ankara University BAP Project, 2009-2012.

Characteristics of PSE Chicken and Turkey Meats and Possibilities of Utilization of PSE Meats in Further-Processed Meat Product Production, Turkish Ministry of Science, Industry and Technology, Industrial Thesis Supporting Program, (SAN-TEZ) PROJECT, Principle Investigator, 2009-2013.

Effect of Rosemary Extract on the Shelf-Life of Hamburger Patties Formulated with Beef Trimmings, Principle Investigator, Ankara University BAP Project 2009-2010.

Effects of Antimicrobial and Antioxidant Edible Films on the Shelf-Life of Ground Beef, Principle Investigator, Ankara University BAP Project, 2006-2009.

Training in Production Techniques of Commercial Table Olive Olive Oil Types in European Countries TOTE Avrupa Ülkelerinde Ticari Sofralık Zeytin ile Zeytinyağı Üretim Teknikleri Konusunda Eğitim Leonardo da Vinci Student Mobility Programme, Principle, Benevento, Perugia, Italy, 2006-2007.

Quality Changes in Marinated Anchovy, TÜBİTAK PROJECT, Principle Investigator, 2006-2007.

Effect of Starter Culture Utilization and Heat Treatment in Turkey Sucuk Production on Product Quality. Researcher, Ankara University BAP Project 2003-2005.

Storage Stability of Mechanically Deboned Chicken Meat during Refrigerated and Frozen Storage. Researcher, Ankara University BAP Project 2001- 2004.

A Research on Utilization of Carrageenan and Pectin in the Production of Low-Fat Frankfurters. TÜBİTAK PROJECT, Researcher, 1996-1999.

Effect of Microwave and Traditional Cooking Methods on the Quality Characteristics of Chicken Meats, Researcher, Ankara University BAP Project, 1992-1994.

Effect of Potassium Sorbate and Lactic Acids on the Shelf-Life of Vacuum-Packaged Chicken Meats, Researcher, Ankara University BAP Project, 1991-1992.

Effect of Salt Brining on Copper and Zinc Contents of Anchovy (*Engraulis engrasicholus*), Researcher, Ankara University BAP Project 1991-1992)

### **Master and PhD Thesis Supervised**

#### **Master Thesis**

##### **Completed:**

1. BETÜL GÖKSÜN (2021). Effects of Elderflowers (*Sambucus nigra* L.) Extract and Ultrasound Assisted Marination on Quality Characteristics of Chicken Meat
2. BÜŞRA CANBAZ (2021). Effect of Gelatin Edible Films Incorporated with Gilaburu (*Viburnum opulus* L.) Extract on Oxidative Stability of Chicken Meat
3. FEYZA YETİMOĞULLARI (2021). Quality Characteristics of “Ankara Erkeç Pastırma” Types Produced From Angora Goat
4. SÜMEYYE TEMİZGÜL (2020). Possibility of Using Kombucha Extract to Reduce Nitrite Content in Sucuk
5. FATİH MEHMET BÜLBÜL (2020). Effect of Microwave Drying and Potassium Chloride As Salt Replacer on Some Quality Characteristics of Dried-Salted Anchovy
6. BULUT ELVAN GÖKÇEN (2019). Production of A Functional Chicken Meat Product with Three Dimensional (3D) Food Printer
7. TAŞKIRAN MELİKE, (2017). The Effect of Microwave Oven Cooking on The Proteins of Chicken Meat
8. ÜNAL DERYA, (2017). Effects of Ozone Treatment and Oxygen Scavengers on the Quality of Chicken Meats

9. ÜVER TUĞBA, (2015). Effect of Carrageenan and Potassium Chloride on Some Characteristics of Reduced-Salt Chicken Myofibrillar Protein Gels
10. ŞAHİN AYÇA, (2013). Effect of Chitosan Coatings Incorporated with Thyme Essential Oil on the Quality of Modified Atmosphere Packaged Sliced Sucuk
11. EKMEKÇİ MESUT, (2012). Effects of Potassium Chloride and Calcium Chloride on Some Quality Characteristics of Reduced Salt Pastırma
12. KIZILKAYA ECE, (2012). Proteolytic Changes during Reduced Sodium Pastırma Processing
13. İLHAN ELİF, (2010). Effect of Rosemary Extract on the Shelf-Life of Hamburger Patties Formulated with Beef Trimmings
14. AŞIK EMİNE, (2009). Effect of Chitosan Coatings Incorporated with Garlic Essential Oil on the Quality Characteristics of Shrimp
15. ÖZTÜRK GÜLÜSTAN, (2009). Effect of Edible Films Incorporated with Lycopene on Oxidative Stability of Ground Beef
16. KODAL BETÜL, (2008). Effect of Antioxidant Edible Films on Oxidative Stability of Ground Beef
17. KARAGÖZ ZEHRA, (2007). Effect of Antimicrobial Edible Films on Microbiological and Color Stability of Ground Beef

**Ongoing:**

18. GİZEM ÖZDEMİR
19. TUĞBA GÖZDE GÜN
20. HİLAL SENA YILDIRIM

**6.2. PhD Thesis**

1. AŞÇIOĞLU ÇİĞDEM (2021) Effects of Dry and Wet Aging on Some Quality Criteria of *Longissimus lumborum* Muscle (Co-advisor)
2. ÇALIK ESİN (2020). Determination of Polimorphisms in the Calpastatin (CAST) Gene in Beef Cattles by Next Generation Sequencing Technology
3. DENİZ EBRU, (2018). Species Identification of Raw Beef Mixtures with Fourier Transform Infrared Spectroscopy (FT-IR)

4. ÇARKCIOĞLU EMİNE, (2017). Effect of Microwave Drying, Salting and Tray Drying Combinations on the Quality Characteristics of Beef
5. YAMAN AHMET, (2015). PSE Incidence in Poultry Meats, and Technological and Biochemical Characteristics of PSE Meats
6. DEMİRHAN BURAK, (2012). Quality Changes in Chicken Meats Packaged under Modified Atmosphere Incorporated with Oxygen Scavengers

**Ongoing:**

7. ÖZTEKİN CEYDA
8. KADIOĞLU PINAR
9. BULUT GÖKÇEN

**Publications**

**Published articles in refereed journals**

Bulut, E.G., Candoğan, K. (2022). Development and characterization of a 3D printed functional chicken meat based snack: Optimization of process parameters and gelatin level. *LWT*, 154,112768.

Candoğan, K., Özdemir, G. (2021). Novel approaches for a sustainable meat production. *Food (Gıda, in Turkish)*, 46 (2): 408-427.

Candoğan, K., Bulut, E.G. (2021). 3D Food printing: an update and future trends. *Food (Gıda, in Turkish)*, Volume 46 (1): 152 - 167.

Barbosa-Cánovas, Donsi, F., Yildiz, S. Candoğan, K., Pokhrel, P.R., Guadarrama-Lezama, A.Y. (2021). Nonthermal Processing Technologies for Stabilization and Enhancement of Bioactive Compounds in Food. *Food Engineering Reviews*.

Asik-Canbaz E., Demirhan, B., Kızılkaya, E., Candoğan, K. (2021). The effects of incorporating chitosan on the functional and physical characteristics of ground beef patties. *Journal Of Food Safety And Food Quality-Archiv Fur Lebensmittelhygiene*, 72 (1): 27-33.

Candoğan, K. Altuntas, E.G., İğci, N. (2021). Authentication and Quality Assessment of Meat Products by Fourier-Transform Infrared (FTIR) Spectroscopy. *Food Engineering Reviews*, 13: 66–91.

Buckow, R., Barbosa-Cánovas, G.V., Candoğan, K. Welti-Chanes, J. Roos, Y. *Food Engineering Reviews Special Issue based on the 13th International Congress on Engineering and Food – (ICEF 13)*. *Food Engineering Reviews*, 13:1–2.

Taskiran, M., Olum, E., and Candogan, K. (2020). Changes in chicken meat proteins during microwave and electric oven cooking. *Journal of Food Processing and Preservation*, e14324, DOI: 10.1111/jfpp.14324.

Çalık, E., Baltacı, V., Candoğan K. (2019). Next Generation Sequencing (NGS) based variation analysis: A new practical biomarker for beef tenderness assessment. *Int. J. Agric. Environ. Food Sci.*, 3(4):233-239.

Deniz, E., Güneş Altuntaş, E., Ayhan, B., İğci, N., Özel Demiralp, D. and Candoğan, K. 2018. Differentiation of beef mixtures adulterated with chicken or turkey meat using FTIR spectroscopy. *Journal of Food Processing and Preservation*, 42 (10), e13767.

Demirhan, B., Candoğan, K. 2017. Active packaging of chicken meats with modified atmosphere including oxygen scavengers. *Poultry science* 96 (5), 1394-1401.

Ayça Şahin, Emine Çarkcioğlu, Burak Demirhan, Kezban Candoğan (2017). Chitosan edible coating and oxygen scavenger effects on modified atmosphere packaged sliced sucuk. *Journal of Food Processing and Preservation*, DOI:10.1111/Jfpp.13213.

Gökçe Polat Yemiş, Kezban Candoğan (2017). Antibacterial activity of soy edible coatings incorporated with thyme and oregano essential oils on beef against pathogenic bacteria. *Food Science and Biotechnology*. 26, 4: 1113–1121.

Bilenler Tuğça, Karabulut İhsan, Candoğan Kezban (2017). Effects of encapsulated starter cultures on microbial and physicochemical properties of traditionally produced and heat treated sausages sucuks. *Lwt - Food Science And Technology*, 75, 425-433.

Evrin Güneş Altuntaş, Ebru Deniz, Beycan Ayhan, Kezban Candoğan, Duygu Özel Demiralp (2017). Identification of Meat Species by Using Molecular and Spectroscopic Techniques. *Turkish Journal of Agriculture - Food Science And Technology*, 5(5): 488-492.

Rodrigues Isabela, Trindade Marco Antonio, Caramit Franciele Roberto, Candoğan Kezban, Pokhrel Prashant Raj, Barbosa Canovas Gustavo V (2016). Effect of high pressure processing on physicochemical and microbiological properties of marinated beef with reduced sodium content. *Innovative Food Science & Emerging Technologies*, 38(B), 328-333.

Deniz Ebru, Mora Leticia, Aristoy M Concepcion, Candoğan Kezban, Toldra Fidel (2016). Free amino acids and bioactive peptides profile of pastirma during its processing. *Food Research International*, 89(1), 194-201.

Çarkcioglu Emine, Rosenthal Andrew J, Candoğan Kezban (2016). Rheological and textural properties of sodium reduced salt soluble myofibrillar protein gels containing sodium tri polyphosphate. *Journal of Texture Studies*, 47, 181-187.

Çiçek Ümran, Kolsarici Nuray, Candoğan Kezban (2015). The sensory properties of fermented turkey sausages effects of processing methodologies and starter culture. *Journal of Food Processing and Preservation*, 39(6), 663-670.

Çiçek Ümran, Kolsarici Nuray, Candoğan Kezban (2014). Lipolytic changes in fermented sausages produced with turkey meat effects of starter culture and heat treatment. *Korean Journal for Food Science of Animal Resources*, 34(1), 40-48.

Barbosa Canovas, G.V., Medina Meza Ilce, Candoğan Kezban, Bermudez Aguirre Daniela (2014). Advanced retorting microwave assisted thermal sterilization mats and pressure assisted thermal sterilization PATS to process meat products. *Meat Science*, 98(3), 420-434.



- Asik Canbaz Emine, Candoğan Kezban (2014). Effects of chitosan coatings incorporated with garlic oil on quality characteristics of shrimp. *Journal of Food Quality*, 37(4), 237-246.
- Coskun Betül Kodal, Çalikoglu Eda, Emiroglu Zehra Karagöz, Candoğan Kezban (2014). Antioxidant active packaging with soy edible films and oregano or thyme essential oils for oxidative stability of ground beef patties. *Journal of Food Quality*, 37(3), 203-212.
- Emiroğlu Zehra, Kodal Betül, Polat Yemis Gökçe, Candoğan Kezban. (2010). Antimicrobial activity of soy edible films incorporated with thyme and oregano essential oils on fresh ground beef patties. *Meat Science*, 86(2), 283-288.
- Ensoy Umran, Kolsarici Nuray, Candoğan Kezban, Karslioglu Betul (2010). Changes in biochemical and microbiological characteristics of turkey sucuks as affected by processing and starter culture utilization. *Journal of Muscle Foods*, 21(1), 142- 165.
- Kolsarici N., Candoğan K, Akoglu İT (2010). Effect of frozen storage on alterations in lipids of mechanically deboned chicken meats. *Gida*(35), 403.
- Candoğan K, Ensoy U, Tagi S, Kolsarici, N, Halkman K (2009). Quality Characteristics of Turkish Raw Meat Balls Produced From Turkey Meat. *Fleiswirtschaft International*(24), 60-63.
- Candoğan Kezban, Wardlaw Foster B, Acton James C (2009). Effect of starter culture on proteolytic changes during processing of fermented beef sausages. *Food Chemistry*, 116(3), 731-737.
- Candoğan Kezban (2009). Et ve Et Ürünlerinde Karsinojenik Heterosiklik Aromatik Aminler. *Akademik Gida*(7), 25.
- Candoğan Kezban, Kartika Suhendra, Wardlaw Foster B, Acton James C (2008). type of bacterial starter culture aging and fermentation effects on some characteristics of inoculated beef sausages. *European Food Research and Technology*, 227(6), 1651-1661.
- Çiçek Ümran, Kolsarici Nuray, Candoğan Kezban (2004). Quality Characteristics Of Spent Layer Surimi During Frozen Storage. *European Food Research And Technology*, 219(1), 14-19.
- Candoğan Kezban, Kolsarici Nuray (2003). Storage Stability Of Low Fat Beef Frankfurters Formulated With Carrageenan Or Carrageenan With Pectin. *Meat Science*, 64(2), 207-214.
- Kartika S, Candoğan K, Grimes LW, Acton, J.C. (2003). Rinse treatment and oxygen barrier properties of films for improving quality retention in vacuum skin packaged fresh chicken. *Journal of Food Science*, 68(5), 1762-1765.
- Candoğan Kezban, Kolsarici Nuray (2003). The effects of carrageenan and pectin on some quality characteristics of low fat beef frankfurters. *Meat Science*, 64(2), 199-206.
- Candoğan Kezban (2002). The effect of tomato paste on some quality characteristics of beef patties during refrigerated storage. *European Food Research And Technology*, 215(4), 305-309.
- Kolsarici, N., Candoğan Kezban (2002). Mekanik ayrılmis etin kalite özellikleri ve kullanım alanları. *Gida*(27), 277, Atif Sayisi: 6 (Kontrol No: 689047)
- Kolsarici Nuray, Candoğan Kezban (1995). The effects of potassium sorbate and lactic acid on the shelf life of vacuum packed chicken meats. *Poultry Science*, 74(11), 1884-1893.

## **Presentations at international scientific meetings**

Bulut, E.G., Gün, T.G., Göksün, B., Şakıyan Demirkol, Ö., Ayhan, K., Candoğan, K. (2021). Chemical, physical and microbiological characteristics of a texture-modified beef- based 3D printed functional product. ICFTNS 2021: 23rd International Conference on Food Technology and Nutrition Sciences Paris, France, 25-26 January-Online).

Bulut, E.G., Gün, T.G., Göksün, B., Canbaz, B., Şakıyan Demirkol, Ö., Ayhan, K., Candoğan, K. (2021). 3D Printed Beef-Based Products for Consumers with Swallowing Difficulties. ICFTNS 2021: 23rd International Conference on Food Technology and Nutrition Sciences Paris, France, 25-26 January-Online).

Çalık, E., Baltacı, V., Candoğan, K. 2019. Detection of polymorphisms in the cast gene from Brangus and Simmental cattles using Next Generation Sequencing. 65<sup>th</sup> International Congress of Meat Science and Technology, Potsdam, Berlin, Germany.

Şakıyan Demirkol, O., N. Kutlu, M. S. Yılmaz, E. Olum, E. Orhan Yanıkan, S. Tağı, K. Ayhan, A. İşçi Yakan, G. V. Barbosa-Cánovas, K. Candoğan. 2019. Comparison on Pastırma processing by the conventional method and microwave drying: physical, biochemical, microbiological, and sensory aspects. 65<sup>th</sup> International Congress of Meat Science and Technology, Potsdam, Berlin, Germany.

Bulut, E.G., van Bommel, K., Candoğan, K. 2019. Development of a functional chicken meat-based snack by three dimensional food printing: Effects of starch addition and cooking methods. XIII European Symposium on The Quality of Eggs and Egg Products and XIII European Symposium on The Quality of Poultry Meat, 23-26 June, Çeşme, Turkey.

Candoğan, K., Barbosa-Cánovas, G. V. 2018. Nonthermal Food Processing Technologies: Ethical Issues. IFT-EFFoST2018 International Nonthermal Processing Workshop and Short Course. September 25-27, Sorrento-Salerno, Italy.

Ünal, D., Candoğan, K. 2018. Ozonated water and oxygen scavenger on the quality of modified atmosphere packaged chicken meat. IFT-EFFoST2018 International Nonthermal Processing Workshop and Short Course. September 25-27, Sorrento-Salerno, Italy.

Kızılkaya, E. and Candoğan, K. 2018. Sensory studies of low sodium pastırmas incorporated with potassium chloride or calcium chloride. 32<sup>nd</sup> EFFoST International Conference, November 5-9, 2018. Nantes, France. 32<sup>nd</sup> EFFoST International Conference, November 5-9. Nantes, France.

Canbaz, B., E.G. Bulut, K. Candoğan. 2018. Quality characteristics of beef meatballs formulated with quinoa and buckwheat groats. 32<sup>nd</sup> EFFoST International Conference, November 5-9, 2018. Nantes, France.

Yaman, A., Demirok, E., Kolsarıcı, N., Candoğan, K. 2018. Effects of marination on some quality characteristics of PSE turkey breast meat. 32<sup>nd</sup> EFFoST International Conference, November 5-9, 2018. Nantes, France.

Emine Çarkcioğlu, Kezban Candoğan. 2017. Modeling the effect of salting beef cubes on tray and microwave drying performance. [P2.207]. 31st EFFoST International Conference. 13-15 November, Sietges, Spain.

Deniz, E., A. Günal, K. Candoğan. 2017. Immunohistochemistry for detection of kidney and liver substitution in beef. [P2.199]. 31st EFFoST International Conference. 13-15 November, Sietges, Spain.

Candoğan, K., Deniz, E., Güneş Altuntaş, E., Duygu Özel Demiralp, Beycan Ayhan. 2017. Fourier Transform Infrared Spectroscopy as a tool for detection of fraudulent raw meat mixtures. 2<sup>nd</sup> International Gazi Pharma Symposium Series, GPSS-2017, 11-13 October, Ankara, Turkey. (INVITED).

Çarkcioğlu, E. and K. Candoğan. 2017. Effect of partial substitution of sodium chloride on the drying characteristics of beef slices. 63rd International Congress of Meat Science and Technology. 13th-18th August. Cork, Ireland.

Deniz, E., Karahisar, S., Yildizhan, H., Altuntaş, E.G., Demiralp, D.Ö., Candoğan, K. 2017. Western Blot Immunoassay in detecting mechanically deboned chicken meat in beef mixtures. 63rd International Congress of Meat Science and Technology. 13th-18th August. Cork, Ireland.

Deniz, E., Güneş Altuntaş, E., Ayhan, B., Özel Demiralp, D., Candoğan, K. 2017. Application of Fourier Transform Infrared (FTIR) Spectroscopy for differentiation of beef mixtures adulterated with mechanically deboned beef. The International Conference on Food Innovation, FoodInnova-2017, 31 January - 3 February, 2017, Cesena, Italy.

Deniz, E., Güneş Altuntaş, E., Ayhan, B., Özel Demiralp, D., Candoğan, K. 2017. A study on detection of horse or donkey meat adulteration in raw beef mixtures by Fourier Transform Infrared (FT-IR) Spectroscopy, The International Conference on Food Innovation, FoodInnova-2017, 31 January - 3 February, 2017, Cesena, Italy.

Candoğan, K. 2017. Detection of Adulteration in Meats: Species Identification of Raw Meat Mixtures Using Fourier Transform Infrared Spectroscopy. International Symposium Food Fraud Prevention & Effective Food Allergen Management, 26-27 January, Bari, Italy. (INVITED).

Deniz, E., İğci, N., Demiralp, D.Ö., Candoğan, K. 2017. Fourier Dönüşümlü Kızılötesi (FTIR) Spektroskopisinin hindi ve dana salamların karakterizasyonunda kullanma olanağı. 4. Uluslararası Beyaz Et Kongresi, Antalya, Türkiye.

Deniz, E., Altuntaş, E.G., Subaşı, Ö.Ö., Ayhan, B., Demiralp, D.Ö., Candoğan, K. 2017. Hindi ve domuz eti karışımlarının ftir spektroskopisi ile ayrimında miyofibrillar ve sarkoplamik protein fraksiyonlarının kullanılabilirliğinin araştırılması. 4. Uluslararası Beyaz Et Kongresi, Antalya, Türkiye.

Deniz, E., Altuntaş, E.G., Subaşı, Ö.Ö., Ayhan, B., Demiralp, D.Ö., Candoğan, K. 2017. Discrimination of poultry meat species in raw beef mixtures through sarcoplasmic and myofibrillar protein fractions by FTIR Spectroscopy. 6th International Congress on Food Technology, Athens, Greece, on March 18-19.

Deniz, E., Altuntaş, E.G., Ayhan, B., Demiralp, D.Ö., Candoğan, K. 2017. An investigation on detection of sheep or goat meat adulteration in beef with FTIR Spectroscopy. 6th International Congress on Food Technology, Athens, Greece, on March 18-19.

Çarkcioğlu, E., Candoğan, K. 2017. Drying characteristics of beef processed with microwave drying and osmotic dehydration. 6th International Congress on Food Technology, Athens, Greece, on March 18-19.

Deniz, E., Altuntas E.G., Ayhan B., Özel Demiralp F. D., Candoğan K. (2016). Protein secondary structures by fourier transform infrared spectroscopy to identify fraudulent meat mixtures. 2nd Food Structure and Design Congress, Antalya, Türkiye.

Çarkcioğlu Emine, Candoğan Kezban (2016). The influence of microwave drying on microstructural properties of beef semimembranosus muscle. 2nd Food Structure and Design Congress.

Üver Tugba, Çarkcioğlu Emine, Deniz Ebru, Candoğan Kezban (2016). Microstructural properties of reduced salt chicken meat myofibrillar protein gels containing kappa carrageenan. 2nd Food Structure and Design Congress

Deniz Ebru, Altuntas Evrim Günes, Subasi Öznur Özbey, Ayhan Beycan, Özel Demiralp Fatma Duygu, Candoğan Kezban (2016). Fourier Transform Infrared Spectroscopy as a rapid method for halal authentication of meat based products. 2nd Food Structure and Design Congress.

Deniz Ebru, Altuntas Evrim Günes, Ayhan Beycan, Özel Demiralp Fatma Duygu, Candoğan Kezban (2016). Identification of mechanically deboned meat adulteration by ftir spectroscopy in chicken and turkey meat formulations in terms of meat components structure. 2nd Food Structure and Design Congress.

Deniz Ebru, Altuntas Evrim Günes, Ayhan Beycan, Özel Demiralp Fatma Duygu, Candoğan Kezban (2016). Detection of adulterated meat mixtures by Fourier Transform Infrared FTIR Spectroscopy. 18th World Congress of Food Science and Technology. Dublin, Ireland.

Çarkcioğlu Emine, Özoglu Özüm, Tepe Feyza, Demir Halime, Kor Hande, Bulut Burçin, Candoğan Kezban (2016). Adding Value to Mechanically Deboned Chicken Meat by Drying. 18th World Congress of Food Science and Technology, Dublin, Ireland.

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