

## Asst. Prof. TOLGAHAN KOCADAĞLI

### Personal Information

Office Phone: [+90 297 626 1](tel:+902976261)

Email: [tolgahan@hacettepe.edu.tr](mailto:tolgahan@hacettepe.edu.tr)

Web: <https://avesis.hacettepe.edu.tr/tolgahan>

### International Researcher IDs

ScholarID: qCr9OewAAAAJ

ORCID: 0000-0003-0549-8488

Publons / Web Of Science ResearcherID: A-1781-2013

ScopusID: 53984407100

Yoksis Researcher ID: 102720

### Education Information

Doctorate, Hacettepe University, Fen Bilimleri Enstitüsü, Gıda Mühendisliği A.B.D., Turkey 2011 - 2016

Postgraduate, Hacettepe University, Fen Bilimleri Enstitüsü, Gıda Mühendisliği A.B.D., Turkey 2009 - 2011

Undergraduate, Hacettepe University, Mühendislik Fakültesi, Gıda Mühendisliği, Turkey 2003 - 2008

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, Investigation and Kinetic Modelling of  $\alpha$ -Dicarbonyl Compound Formation in Foods, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Gıda Mühendisliği (Dr), 2016

Postgraduate, Farklı pişirme uygulamaları ile fırıncılık ürünlerinde akrilamid oluşumunun sınırlandırılması, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Gıda Mühendisliği (YI) (Tezli), 2011

### Research Areas

Food Engineering, Food Science, Food Chemistry, Engineering and Technology

### Academic Titles / Tasks

Assistant Professor, Hacettepe University, Mühendislik Fakültesi, Gıda Mühendisliği Bölümü, 2019 - Continues

Research Assistant PhD, University of Reading, Department of Food and Nutritional Sciences, 2017 - 2018

### Published journal articles indexed by SCI, SSCI, and AHCI

1. Effects of fermentation and alkalisation on the formation of endocannabinoid-like compounds in

olives

KOCADAĞLI T., YILMAZ C., GÖKMEN V.

FOOD CHEMISTRY, vol.457, 2024 (SCI-Expanded)

- II. **Determination of endocannabinoids in fermented foods of animal and plant origin by liquid chromatography tandem mass spectrometry**  
YILMAZ C., KOCADAĞLI T., GÖKMEN V.  
Food Chemistry, vol.427, 2023 (SCI-Expanded)
- III. **Effect of formulation on the dispersion kinetics of baby biscuits in water, milk, and fruit juice**  
ERDEM N., KOCADAĞLI T., Taş N., Çelik S., GÖKMEN V.  
European Food Research and Technology, vol.249, no.11, pp.2925-2933, 2023 (SCI-Expanded)
- IV. **Formation of Histamine, phenylethylamine and  $\gamma$ -Aminobutyric acid during sprouting and fermenting of selected wholegrains**  
ÇELİK E. E., Canli M., KOCADAĞLI T., Özkaynak Kanmaz E., GÖKMEN V.  
Food Research International, vol.173, 2023 (SCI-Expanded)
- V. **Modelling of perceived sweetness in biscuits based on sensory analysis as a new tool to evaluate reformulation performance in sugar reduction studies**  
ERDEM N., Taş N., KOCADAĞLI T., GÖKMEN V.  
Food Chemistry, vol.425, 2023 (SCI-Expanded)
- VI. **Effect of salts on the formation of acrylamide, 5-hydroxymethylfurfural and flavour compounds in a crust-like glucose/wheat flour dough system during heating**  
Göncüoğlu Taş N., KOCADAĞLI T., Balagiannis D. P., GÖKMEN V., Parker J. K.  
Food Chemistry, vol.410, 2023 (SCI-Expanded)
- VII. **Safety concerns of processed foods in terms of neo-formed contaminants and NOVA classification**  
Tas N., KOCADAĞLI T., GÖKMEN V.  
CURRENT OPINION IN FOOD SCIENCE, vol.47, 2022 (SCI-Expanded)
- VIII. **Effects of sprouting and fermentation on the formation of Maillard reaction products in different cereals heated as wholemeal**  
Yiltirak S., KOCADAĞLI T., ÇELİK E. E., KANMAZ E. Ö., GÖKMEN V.  
FOOD CHEMISTRY, vol.389, 2022 (SCI-Expanded)
- IX. **Formation of acrylamide in coffee**  
KOCADAĞLI T., GÖKMEN V.  
CURRENT OPINION IN FOOD SCIENCE, vol.45, 2022 (SCI-Expanded)
- X. **Acrylamide in Corn-Based Thermally Processed Foods: A Review**  
Zilic S., Nikolic V., ATAÇ MOGOL B., Hamzalioglu A., Tas N., KOCADAĞLI T., Simic M., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.70, no.14, pp.4165-4181, 2022 (SCI-Expanded)
- XI. **Formation of Bioactive Tyrosine Derivatives during Sprouting and Fermenting of Selected Whole Grains**  
Canli M., ÇELİK E. E., KOCADAĞLI T., KANMAZ E. Ö., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.69, no.42, pp.12517-12526, 2021 (SCI-Expanded)
- XII. **Pea protein properties are altered following glycation by microwave heating**  
ERTUĞRUL Ü., NAMLI S., TAŞ O., KOCADAĞLI T., GÖKMEN V., ŞÜMNÜ S. G., Oztop M. H.  
LWT-FOOD SCIENCE AND TECHNOLOGY, vol.150, 2021 (SCI-Expanded)
- XIII. **Effects of Sprouting and Fermentation on Free Asparagine and Reducing Sugars in Wheat, Einkorn, Oat, Rye, Barley, and Buckwheat and on Acrylamide and 5-Hydroxymethylfurfural Formation during Heating**  
Yiltirak S., KOCADAĞLI T., ÇELİK E. E., KANMAZ E. Ö., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.69, no.32, pp.9419-9433, 2021 (SCI-Expanded)
- XIV. **Targeted precursor addition to increase baked flavour in a low-acrylamide potato-based matrix**  
Kocadagli T., Methven L., Kant A., Parker J. K.  
FOOD CHEMISTRY, vol.339, 2021 (SCI-Expanded)
- XV. **Time dependent change of ethanol consumption biomarkers, ethyl glucuronide and ethyl sulphate,**

**after single dose ethanol intake**

Karacaoglu E., Odabasi A. B., AKÇAN R., TÜMER A. R., Lale A., KOCADAĞLI T., GÖKMEN V.

TURKISH JOURNAL OF BIOCHEMISTRY-TURK BIYOKIMYA DERGISI, vol.44, no.3, pp.379-387, 2019 (SCI-Expanded)

- XVI. **Determination of serotonin in nuts and nut containing products by liquid chromatography tandem mass spectrometry**  
YILMAZ C., Taş N., KOCADAĞLI T., GÖKMEN V.  
Food Chemistry, vol.272, pp.347-353, 2019 (SCI-Expanded)
- XVII. **Evolution of surface temperature and its relationship with acrylamide formation during conventional and vacuum-combined baking of cookies**  
Yıldız H. G., Palazoğlu T. K., Miran W., KOCADAĞLI T., GÖKMEN V.  
Journal of Food Engineering, vol.197, pp.17-23, 2017 (SCI-Expanded)
- XVIII. **Multiresponse kinetic modelling of Maillard reaction and caramelisation in a heated glucose/wheat flour system**  
KOCADAĞLI T., GÖKMEN V.  
FOOD CHEMISTRY, vol.211, pp.892-902, 2016 (SCI-Expanded)
- XIX. **Effect of roasting and brewing on the antioxidant capacity of espresso brews determined by the QUENCHER procedure**  
KOCADAĞLI T., GÖKMEN V.  
Food Research International, vol.89, pp.976-981, 2016 (SCI-Expanded)
- XX. **Effects of Sodium Chloride, Potassium Chloride, and Calcium Chloride on the Formation of alpha-Dicarbonyl Compounds and Furfurals and the Development of Browning in Cookies during Baking**  
KOCADAĞLI T., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.64, no.41, pp.7838-7848, 2016 (SCI-Expanded)
- XXI. **Effect of Sodium Chloride on alpha-Dicarbonyl Compound and 5-Hydroxymethyl-2-furfural Formations from Glucose under Caramelization Conditions: A Multiresponse Kinetic Modeling Approach**  
KOCADAĞLI T., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.64, no.32, pp.6333-6342, 2016 (SCI-Expanded)
- XXII. **Effects of baking conditions and dough formulations on phenolic compound stability, antioxidant capacity and color of cookies made from anthocyanin-rich corn flour**  
Žilić S., KOCADAĞLI T., Vančetović J., GÖKMEN V.  
LWT - Food Science and Technology, vol.65, pp.597-603, 2016 (SCI-Expanded)
- XXIII. **Formation of  $\alpha$ -dicarbonyl compounds in cookies made from wheat, hull-less barley and colored corn and its relation with phenolic compounds, free amino acids and sugars**  
KOCADAĞLI T., Žilić S., Taş N., Vančetović J., Dodig D., GÖKMEN V.  
European Food Research and Technology, vol.242, no.1, pp.51-60, 2016 (SCI-Expanded)
- XXIV. **Investigation of  $\alpha$ -dicarbonyl compounds in baby foods by high-performance liquid chromatography coupled with electrospray ionization mass spectrometry**  
KOCADAĞLI T., GÖKMEN V.  
Journal of Agricultural and Food Chemistry, vol.62, no.31, pp.7714-7720, 2014 (SCI-Expanded)
- XXV. **Determination of melatonin and its isomer in foods by liquid chromatography tandem mass spectrometry**  
KOCADAĞLI T., YILMAZ C., GÖKMEN V.  
Food Chemistry, vol.153, pp.151-156, 2014 (SCI-Expanded)
- XXVI. **Formation of melatonin and its isomer during bread dough fermentation and effect of baking**  
YILMAZ C., KOCADAĞLI T., GÖKMEN V.  
Journal of Agricultural and Food Chemistry, vol.62, no.13, pp.2900-2905, 2014 (SCI-Expanded)
- XXVII. **Acrylamide and 5-hydroxymethylfurfural formation during baking of biscuits: NaCl and temperature-time profile effects and kinetics**  
Van Der Fels-Klerx H., Capuano E., Nguyen H., ATAÇ MOGOL B., KOCADAĞLI T., Göncüoğlu Taş N., Hamzalıoğlu A., Van Boekel M., GÖKMEN V.

- Food Research International, vol.57, pp.210-217, 2014 (SCI-Expanded)
- XXVIII. **Effect of combining conventional frying with radio-frequency post-drying on acrylamide level and quality attributes of potato chips**  
Koklamaz E., Palazoğlu T. K., KOCADAĞLI T., GÖKMEN V.  
Journal of the Science of Food and Agriculture, vol.94, no.10, pp.2002-2008, 2014 (SCI-Expanded)
- XXIX. **Effects of infusion conditions and decaffeination on free amino acid profiles of green and black tea**  
KOCADAĞLI T., OZDEMIR K. S., GÖKMEN V.  
FOOD RESEARCH INTERNATIONAL, vol.53, no.2, pp.720-725, 2013 (SCI-Expanded)
- XXX. **Compositional, Nutritional, and Functional Characteristics of Instant Teas Produced from Low- and High-Quality Black Teas**  
Alasalvar C., Pelvan E., Ozdemir K. S., KOCADAĞLI T., Mogol B. A., Pasli A. A., Ozcan N., Özçelik B., GÖKMEN V.  
JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, vol.61, no.31, pp.7529-7536, 2013 (SCI-Expanded)
- XXXI. **Model studies on the role of 5-hydroxymethyl-2-furfural in acrylamide formation from asparagine**  
GÖKMEN V., KOCADAĞLI T., Göncüoğlu N., Mogol B. A.  
Food Chemistry, vol.132, no.1, pp.168-174, 2012 (SCI-Expanded)
- XXXII. **Effect of Radio Frequency Postdrying of Partially Baked Cookies on Acrylamide Content, Texture, and Color of the Final Product**  
Koray Palazoğlu T., Coşkun Y., Kocadağlı T., GÖKMEN V.  
Journal of Food Science, vol.77, no.5, 2012 (SCI-Expanded)
- XXXIII. **Mitigation of acrylamide formation in cookies by using Maillard reaction products as recipe modifier in a combined partial conventional baking and radio frequency post-baking process**  
KOCADAĞLI T., Koray Palazoğlu T., GÖKMEN V.  
European Food Research and Technology, vol.235, no.4, pp.711-717, 2012 (SCI-Expanded)
- XXXIV. **In depth study of acrylamide formation in coffee during roasting: Role of sucrose decomposition and lipid oxidation**  
KOCADAĞLI T., Göncüoğlu N., Hamzalioglu A., GÖKMEN V.  
Food and Function, vol.3, no.9, pp.970-975, 2012 (SCI-Expanded)

### Articles Published in Other Journals

- I. **Adding Calcium to Foods and Effect on Acrylamide**  
Tas N. G., Hamzalioglu A., KOCADAĞLI T., GÖKMEN V.  
CALCIUM: CHEMISTRY, ANALYSIS, FUNCTION AND EFFECTS, vol.10, pp.274-290, 2016 (Peer-Reviewed Journal)

### Books & Book Chapters

- I. **Metabolism of Acrylamide in Humans and Biomarkers of Exposure to Acrylamide**  
KOCADAĞLI T., GÖKMEN V.  
in: Acrylamide in Food Analysis Content and Potential Health Effects, Vural Gökmen, Editor, Elsevier Inc., pp.109-128, 2015

### Refereed Congress / Symposium Publications in Proceedings

- I. **Modelling of perceived sweetness in biscuits to evaluate reformulation performance in sugar reduction studies**  
ERDEM N., TAŞ N., KOCADAĞLI T., GÖKMEN V.  
The 36th EFFoST International Conference, Dublin, Ireland, 07 November 2022
- II. **Kinetic Modelling of Dispersion of Baby Biscuits in Liquid as a Quality Assessment Tool**

KOCADAĞLI T., Çelik S., ERDEM N., TAŞ N., GÖKMEN V.

The 36th EFFoST International Conference, Dublin, Ireland, 07 November 2022

- III. **Improvement of flavour in low acrylamide baked potato crackers**  
KOCADAĞLI T., Methven L., Parker J.  
2nd Food Chemistry Conference: Shaping the Future of Food Quality, Safety, Nutrition and Health, 17 - 19 September 2019
- IV. **Understanding changes in aroma generation in model biscuits where inorganic salts have been used to mitigate acrylamide formation**  
Parker J., TAŞ N., KOCADAĞLI T., Balagiannis D., GÖKMEN V.  
ISMR 13-13th International Symposium on the Maillard Reaction, 10 - 13 September 2018
- V. **Effect of Sodium Chloride, Potassium Chloride and Calcium Chloride on the Flavour Formation during Heating of Wheat Flour Glucose Model System**  
KOCADAĞLI T., Balagiannis D., GÖKMEN V., Parker J.  
15th Weurman Flavour Research Symposium, Graz, Austria, 18 - 22 September 2017, pp.111-114
- VI. **Radio Frequency and Vacuum Post-Baking Technologies to Mitigate Acrylamide Formation**  
KOCADAĞLI T., ATAÇ MOGOL B., GÖKMEN V.  
Acrylamide-Regulatory and Industry Update, United Kingdom, 16 October 2017
- VII. **Effect of metal salts on the formation of aroma compounds and acrylamide during heating**  
TAŞ N., KOCADAĞLI T., Balagiannis D., GÖKMEN V., Parker J.  
Acrylamide - Regulatory and Industry Update, 16 October 2017
- VIII. **Effect of Sodium Chloride, Potassium Chloride and Calcium Chloride on the Flavour Formation during Heating of Wheat Flour-Glucose Model System**  
KOCADAĞLI T., Balagiannis D., GÖKMEN V., Parker J.  
5th Nursten Postgraduate Flavour Symposium 2017, Belfast, United Kingdom, 29 - 30 June 2017
- IX. **Effect of sodium chloride on dicarbonyl compounds and 5 hydroxymethyl 2 furfural formations from glucose under caramelization conditions A multiresponse kinetic modeling approach**  
KOCADAĞLI T., GÖKMEN V.  
1th Food Chemistry Conference - Shaping the Future of Food Quality, Health and Safety, 29 October - 01 November 2016
- X. **THE EFFECT OF BAKING CONDITIONS AND DOUGH FORMULATIONS ON DICARBONYL COMPOUNDS FORMATION AND ANTHOCYANINS STABILITY IN COOKIES MADE FROM BLUE CORN FLOUR**  
Zilic S., GÖKMEN V., KOCADAĞLI T., Vancetovic J., TAŞ N.  
13th Congress of Nutrition, 26 - 28 October 2016
- XI. **The effect of baking conditions and dough formulations on alpha dicarbonyl compounds formation and anthocyanins stability in cookies made from blue corn flour**  
Zilic S., GÖKMEN V., KOCADAĞLI T., Vancetovic J., TAŞ N.  
13th Congress of Nutrition, 26 - 28 October 2016
- XII. **Multiresponse Kinetic Modeling of Dicarbonyl Compound Formation in Wheat Flour Glucose Model Dough System under Dry Heating Conditions**  
KOCADAĞLI T., GÖKMEN V.  
Euro Food Chem XVIII, 13 - 16 October 2015
- XIII. **Multiresponse kinetic modeling of 1 2 dicarbonyl compound formation in wheat flour glucose model dough system under dry heating conditions**  
KOCADAĞLI T., GÖKMEN V.  
EuroFoodChem XVIII, Spain, 13 - 16 October 2015
- XIV. **Multiresponse Kinetic Modeling of 1 2 Dicarbonyl Compound Formation in Wheat Flour Glucose Model Dough System under Dry Heating Conditions**  
KOCADAĞLI T., GÖKMEN V.  
12th International Symposium on Maillard Reaction, 1 - 04 September 2015
- XV. **Changes in antioxidant activity of coffee during roasting and of volume fractions of espresso brew**  
KOCADAĞLI T., GÖKMEN V.

Third International Congress on Cocoa Coffee and Tea, 22 - 25 June 2015

**XVI. Kinetic modeling of the formation of acrylamide and HMF in biscuits**

Van der Fels Klerx H., Nguyen H., ATAÇ MOGOL B., Capuano E., KOCADAĞLI T., TAŞ N., HAMZALIOĞLU B. A.  
EuroFoodChem XVII, 7 - 10 May 2013

**XVII. High resolution mass spectrometry analysis of reaction products and intermediates formed in carbonyl-asparagine model system during heating**

ATAÇ MOGOL B., TAŞ N., KOCADAĞLI T., GÖKMEN V.

11th International Symposium on the Maillard Reaction "Centenary of the Maillard Reaction Discovery (1912-2012)", 16 - 20 September 2012

**XVIII. In depth study of acrylamide formation in coffee during roasting**

KOCADAĞLI T., TAŞ N., HAMZALIOĞLU B. A., GÖKMEN V.

11th International Symposium on the Maillard Reaction "Centenary of the Maillard Reaction Discovery (1912-2012)", 16 - 20 September 2012

**XIX. Effect of repeated use of frying oils on the formation of harmful compounds**

ATAÇ MOGOL B., TAŞ N., KOCADAĞLI T., DURMAZ G., GÖKMEN V.

VII. International Nutrition and Dietetics Congress, 14 - 18 April 2010

## Supported Projects

YILMAZ C., KOCADAĞLI T., Project Supported by Higher Education Institutions, Hayvansal ve Bitkisel Kaynaklı Fermente Gıdalarda Endokannabinoid Analizine Yönelik Sıvı Kromatografisi Tandem Kütle Spektrometresi ile Metot Geliştirilmesi, 2021 - 2022

Kocadağlı T., Gökmen V., Taş N., TÜBİTAK International Bilateral Joint Cooperation Program Project, Healthy Processed Food Design for Future Adults: Development of Sugar Reduction Strategies for Bakery Products, 2020 - 2022

Gökmen V., Kocadağlı T., Çelik E. E., TÜBİTAK Project, Farklı Tahıllardan Çimlendirme ve Fermantasyon ile Geliştirilecek Fonksiyonel Gıda Bileşenlerinin Biyoaktif ve Nöroaktif Bileşikler ile Isıl İşlem Bulaşanları Açısından Değerlendirilmesi, 2019 - 2021

GÖKMEN V., KOCADAĞLI T., Project Supported by Higher Education Institutions, Karamelizasyon Koşullarında Glukozdan Dikarbonil Bileşikleri ve 5-Hidroksimetil-2-furfural Oluşumuna Sodyum Klorürün Etkisi: Çok-Değişkenli Kinetik Modelleme Yaklaşımı, 2016 - 2017

KOCADAĞLI T., GÖKMEN V., Project Supported by Higher Education Institutions, Demleme Koşullarının ve Dekafeinizasyonun Siyah ve Yeşil Çaylarda Serbest Amino Asit Profili Üzerine Etkisi, 2015 - 2015

KOCADAĞLI T., GÖKMEN V., Project Supported by Higher Education Institutions, KURU ISITMA KOŞULLARINDA BUĞDAY UNU-GLUKOZ MODEL SİSTEMİNDE 1,2-DİKARBONİL BİLEŞİKLERİ OLUŞUMUNUN ÇOK-DEĞİŞKENLİ KİNETİK MODELLENMESİ, 2015 - 2015

## Patent

ATAÇ MOGOL B., KOCADAĞLI T., GÖKMEN V., Akrlamid içermeyen, fırınlanmış unlu mamul ve üretim yöntemi, Patent, CHAPTER A Human Needs, Standard Registration, 2015

## Metrics

Publication: 58

Citation (WoS): 779

Citation (Scopus): 1064

H-Index (WoS): 17

H-Index (Scopus): 19

## **Awards**

Kocadađlı T., Hacettepe Üniversitesi Bilim Teşvik Ödülü 2019, Hacettepe Üniversitesi, June 2020

Kocadađlı T., RSC Food Group Junior Medal 2017, Royal Society Of Chemistry, February 2018

## **Non Academic Experience**

Univeristy of Reading