

## SPECTROPHOTOMETRIC ANALYSIS OF NATURAL TEETH COLOR IN PATIENTS WITH DIFFERENT ORAL HYGIENE HABITS

Julija Zarkova Atanasova<sup>1\*</sup>, Katerina Zlatanovska<sup>1</sup>,  
Cena Dimova<sup>1</sup>, Sanja Naskova<sup>1</sup>, Lidija Popovska<sup>2</sup>

<sup>1</sup>Department of Oral and Maxillofacial Surgery and  
Dental implantology, Faculty of Medical Sciences,  
"Goce Delcev" University, Krste Misirkov 10-a,  
2000 Stip, Macedonia

<sup>2</sup> Faculty of Dentistry, University Ss. Cyril and Methodius,  
Mother Teresa 17, 1000 Skopje, Macedonia

\*email: [julija.zarkova@ugd.edu.mk](mailto:julija.zarkova@ugd.edu.mk)

### Abstract

The key to keeping a bright, *healthy* smile and good oral health is to practice proper *oral hygiene*. The aim of our study was to see the difference between teeth color in patients who have different habits of oral hygiene.

First a questionnaire was filled by the selected patients (N = 235) consisted of a series of questions for the purpose of gathering information about oral hygiene habits. Then the color of their central incisors, was measured with intraoral spectrophotometer ShadePilotTM (Degu Dent, Germany), in the middle third of the crown and interpreted with shade tabs from three shade guides Vita Classic, Ivoclar Chromascope and Vita 3D Master. For statistical analysis the patients were grouped into three groups according to the answered questions, the first with excellent habits, the second with good and the third group with bad habits in maintaining oral hygiene. Pearson's chi-squared test ( $\chi^2$ ) was used as a statistical method for analyzing the difference between groups.

Results showed that different habits of oral hygiene are an important factor from which the teeth shade depends ( $p < 0,001$ ) ( $p = 0,000$ ). The patients with excellent habits have brightest teeth shades and darkest in patients with bad habits. The reason for darker shades in the patient is the accumulated dental plaque in which pigments are trapped and gives the teeth more yellowish and matte appearance.




We concluded that practicing an excellent and good oral hygiene habit like brushing properly and regularly, using mouthwashes and every day flossing can give a whiter and more healthy looking teeth, than others whit bad oral habits. Overall tooth color is very important for good aesthetic and confidence in patients.

**Key words:** *Tooth color, Shade guides, Spectrophotometer.*



NUTRICON 2016

1-2 December, 2016  
Skopje, Macedonia



**Food Quality and Safety,  
Health and Nutrition**

**Book of Abstracts**



ISBN 978-608-4565-10-9

Conference on Food Quality and Safety,  
Health and Nutrition - NUTRICON 2016

**Editor:**

Vladimir Kakurinov, Prof. Dr

**Abstracts/Paper Review**

All abstracts and papers are reviewed by the International Board of Reviewers

**Publisher:**

Consulting and Training Center KEY  
Sv. Kiril i Metodij, 52-1/3  
1000 Skopje, Republic of Macedonia

**Cover and Graphic Design**

Boris Kakurinov,  
Consulting and Training Center KEY, Skopje, Republic of Macedonia

**Printed by**

Kontura, Skopje, Republic of Macedonia

**Edition:**

100

All rights reserved. None of the parts of this book can be reproduced or transferred in any form by any means, electronic or technical, including photo copy, scanning and saving in information systems, without previous agreement with the publisher in written form.

CIP - Каталогизација во публикација  
Национална и универзитетска библиотека „Св. Климент Охридски“, Скопје

663/664(062)(048.3)

FOOD quality and safety, health and nutrition:  
Nutricon 2016, 1-2 December, 2016, Skopje, Macedonia:  
Book of abstracts / [Editor Vladimir Kakurinov]  
Skopje: Consulting and training center - Key, 2016.  
98 стр. ; 25 см

ISBN 978-608-4565-10-9

а) Храна - Биотехнологија - Собири - Апстракти  
COBISS.MK-ID 102032650



<b>MATRIX METALLOPROTEINASES IN ORAL DISEASES</b> <i>Biljana Evrosimovska</i> .....	79
<b>ORAL HYGIENE LEVEL MAINTENANCE OF DENTAL MEDICINE STUDENTS</b> <i>Darko Kocovski, Verica Toneva, Cena Dimova, Katerina Zlatanovska, Sanja Naskova</i> .....	81
<b>THE CORRELATION BETWEEN DENTAL CARIES AND SOCIO-ECONOMIC STATUS IN CHILDREN FROM 4-6 YEARS</b> <i>Sanja Naskova, Snezana Ijovska, Cena Dimova, Katerina Zlatanovska, Julija Zarkova-Atanasova</i> .....	83

## XI. ORAL/DENTAL HEALTH AND NUTRITION

<b>NANO-ANTIOXIDANTS: AN EMERGING STRATEGY FOR PROTECTION OF ORAL LESIONS</b> <i>Jasmin Fidoski, Aleksandar Stamatovski, Alberto Benedetti, Oliver Tusevski, Sonja Gadzovska Simic, Nikola Hadzi-Petrushev</i> .....	87
<b>SPECTROPHOTOMETRIC ANALYSIS OF NATURAL TEETH COLOR IN PATIENTS WITH DIFFERENT ORAL HYGIENE HABITS</b> <i>Julija Zarkova Atanasova, Katerina Zlatanovska, Cena Dimova, Sanja Naskova, Lidija Popovska</i> .....	89
<b>MAINTENANCE OF ORAL HYGIENE OF DENTAL IMPLANTS</b> <i>Sarita Kadrova, Cena Dimova, Milan Dumitraskovik, Elena Mileva</i> .....	90
<b>ANTIOXIDANT ACTIVITY OF NANO-BIO FUSION GINGIVAL GEL</b> <i>Jasmin Fidoski, Aleksandar Stamatovski, Oliver Tusevski, Sonja Gadzovska Simic, Nikola Hadzi-Petrushev</i> .....	92

## XII. NUTRITION FOR COLLECTIVES AND SPECIAL NEEDS

<b>SUPPLEMENTATION IN SPORT NUTRITION</b> <i>Angela Vasileska, Oliver Bojceski</i> .....	97
---	----