

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/369236935>

Adli gemoloji açısından tüketicinin korunması hakkında bir örnek; Mücevher sektöründe yaygınca kullanılan beril ($\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$) mineralinin yeşil renkli iki türünün (yeşil beril ve...

Conference Paper · February 2023

CITATIONS

0

READS

11

4 authors, including:



Murat Hatipoğlu

Dokuz Eylül University Izmir/TURKEY

173 PUBLICATIONS 583 CITATIONS

[SEE PROFILE](#)



Meltem Gurbuz

Mersin University

5 PUBLICATIONS 5 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



Oltu Taşının Mineralojiksel ve Gemolojiksel İncelemesi (2012.KB.FEN.082)(Dokuz Eylül Üniversitesi BAP Destekli)(Proje Yürütücüsü)(09/2012-09/2013) [View project](#)



Pırlanta Kesilmiş Elmasların Renk İyileştirmelerinin ve Sentetik Oluşumlarının Belirlenmesi (2009-KB-FEN-051)(Dokuz Eylül Üniversitesi BAP Destekli)(Proje Yürütücüsü)(09/2009/09/2011) [View project](#)



**INTERNATIONAL EUROASIA
Congress on Scientific Researches and
Recent Trends 10**

*February 16-17, 2023
Baku, Azerbaijan*

ABSTRACT BOOK



ABSTRACT BOOK

February 16-17, 2023 Baku, Azerbaijan

ISBN: 978-625-6404-90-8

INTERNATIONAL EUROASIA

Congress on Scientific Researches and Recent Trends 10

February 16-17, 2023

Baku, Azerbaijan

ABSTRACT BOOK

Editors

Prof. Dr. Gulzar IBRAHIMOVA
Merve KIDIRYUZ

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law.

Institution of Economic Development and Social
Research Publications® (The Licence Number of
Publicator: 2014/31220) TURKEY TR: +90 3129115220
E mail: iksadyayinevi@gmail.com

www.iksadyayinevi.com

It is responsibility of the author to abide by the
publishing ethics rules IKSAD Publications – 2023©

Issued: 14.03.2023
ISBN: 978-625-6404-90-8

CONGRESS ID

CONGRESS TITLE

EUROASIA International Congress on Scientific Researches and Recent Trends-X

DATE AND PLACE

February 16-17, 2023

Baku, Azerbaijan

ORGANIZATION

**Baku Euroasian University, Azerbaijan
Institute of Economic Development and Social Research (IKSAD)**

HONORARY PRESIDENT OF CONGRESS

Baku Eurasia University Rector

Prof. Dr. Nazım HÜSEYNLI

HEAD OF ORGANIZING COMMITTEE

Prof. Dr. Gülzar IBRAHIMOVA

HEAD OF SCIENTIFIC COMMITTEE

Prof. Dr. Salih ÖZTÜRK

GENERAL COORDINATOR

Merve KIDIRYUZ

PARTICIPANTS COUNTRIES (34 Countries)

Türkiye (91 paper)

**Türkiye, Slovakia, Azerbaijan, Russia, Kazakhstan, Saudi Arabia, Tunisia, Algeria,
Morocco, Bulgaria, Pakistan, Uzbekistan, India, Ethiopia, Romania, Iraq, Poland, Italy,
Germany, Indonesia, Nigeria, Lebanon, Slovenia, Benin, Brazil, North Macedonia,
Serbia, Iran, Georgia, Afghanistan, Slovensko, United Kingdom, Lithuania, Portugal**

(117 paper)

Total Accepted Article:208

Total Rejected Papers: 26

***All applications have undergone a double-blind peer review process**

CONGRESS ORGANIZING COMMITTEE

Prof. Dr. Nazım HÜSEYNLI
HONORARY PRESIDENT OF THE CONGRESS
Baku Eurasia University Rector

Prof. Dr. Gülzar İBRAHİMOVA
HEAD OF ORGANIZING COMMITTEE
Vice Rector of Baku Euroasian University

Prof. Dr. Salih ÖZTÜRK
ORGANIZING BOARD MEMBER
Namik Kemal University

Prof. Dr. Mahire HÜSEYNOVA
Azerbaijan State Pedagogical University
ORGANIZING BOARD MEMBER

Dr. Elşad MİRBEŞİROĞLU
ORGANIZING BOARD MEMBER

Assoc. Dr. Nigar HÜSEYNOVA
ORGANIZING BOARD MEMBER
Baku Eurasia University Vice Rector

Assoc. Prof. Dr. Siyavuş GASİMOV
MEMBER OF ORGANIZING COMMITTEE Baku Euroasian
University

Günhan HÜSEYNLI
MEMBER OF ORGANIZING COMMITTEE
Baku Euroasian University

Assoc. Prof. Dr. Mansim MAMMADOV

MEMBER OF ORGANIZING COMMITTEE

Baki Euroasian University

Assoc. Prof. Dr. Salman SÜLEYMANOV

ORGANIZING BOARD MEMBER

Dean Of Baku Eurasia University Faculty Of Philology

Assoc. Prof. Dr. Müttelim REHİMOV

MEMBER OF ORGANIZING COMMITTEE

The Dean of Baki Euroasian University Economy Facult

Assoc. Prof. Dr. Elmira MAMMADOVA-KEKECH

ORGANIZING BOARD MEMBER

Baku Eurasia University Department Chair

Assoc. Prof. Dr. Sevda RZAYEVA

ORGANIZING BOARD MEMBER

Baku Eurasia University Department Chair

Assoc. Prof. Dr. Yasin QARAMEMMEDLI

ORGANIZING BOARD MEMBER

Azerbaijan State Pedagogy University

Assoc. Prof. Dr. Saadat SHIKHIYEVA

MEMBER OF ORGANIZING COMMITTEE

Baki Euroasian University

Assoc. Prof. Dr. Ruslan ABDULLAYEV

ORGANIZING BOARD MEMBER

Baku Eurasia University

Assist. Prof. Dr. Muntazir MEHDI

MEMBER OF ORGANIZING COMMITTEE

National University of Modern Languages, Islamabad Pakistan

Chief Editor of EUROASIA JOURNAL of Social Science

Assoc. Prof. Dr. Gülahmet İMANOV

MEMBER OF ORGANIZING COMMITTEE

Baku State University

Elvan CAFEROV

Azerbaijan State Pedagogy University

Dr. Bauyrzhan BOTAKARAYEV

MEMBER OF ORGANIZING COMMITTEE

Hodja Ahmat Yassawi University

Dr. Cavit POLAT

MEMBER OF ORGANIZING COMMITTEE

Igdir University

Dr. Mariam S. OLSSON

MEMBER OF ORGANIZING COMMITTEE

Chief Editor of EUROASIA JOURNAL of Applied Sciences

Merve KIDIRYÜZ

Congress General Coordinator

İKSAD Institute

SCIENCE AND ADVISORY BOARD

Prof. Dr. Nazım HÜSEYNLI

HONORARY PRESIDENT OF THE CONGRESS

Baku Eurasia University Rector

Dr. Gülzar IBRAHIMOVA

HEAD OF ORGANIZING COMMITTEE

Vice Rector of Baku Euroasian University

Dr. Gulzar Isahan

Bakü Avrasya Üniversitesi (Rektör Yardımcısı)

Dr. David C. Bueno

Columban College, Philippines

Dr. Sehrane KASIMİ

Azerbaijan National Academy of Sciences

Dr. Eric Matriano

Columban College, Philippines

Dr. Myrna Matira

Maritime Academy Of Asia And The Pacific, Philippines

Dr. Victoria Valenzuel

Bulacan State University, Philippines

Dr. Nemia Mirador Galang

President Ramon Magsaysay State University, Philippines

Dr. Geoffrey Sepillo

President Ramon Magsaysay State University, Philippines

Dr. Roel P. Anicas

Gordon College, Philippines

Dr. John James Larafoste

Central Luzon College Of Science And Technology, Philippines

Dr. Abdul Rahmat

Gorontalo State University, Indonesia

Dr. Virendra Singh Choudhary

Jaipur National University, India

Dr. Devraj Singh Chouhan

Jaipur National University, India

Dr. Mustafa TALAS

Niğde Ömerhalisdemir University

Dr. Akbar VALADBIGI

Urumiye University

Dr. Sarash KONYRBAYEVA

Kazak State University

Dr. Osman ERKMEN

Gaziantep University

Dr. Afaq SADYGOV

Azerbaijan State Pedagogical University

Dr. Hacer HUSEYNOVA

Azerbaijan State Pedagogical University

Dr. Jacqueline AYOUB

Lebanese University sector -3- Rector

Dr. Kasım KARAMAN

Erciyes University

Dr. Sevcan YILDIZ

Akdeniz University

Dr. ZHI Huan

Minzu University of China

Dr. Aykar Tekin BOZKURT

Gaziantep University

Dr. Canan BİRİMOĞLU OKUYAN

Hatay Mustafa Kemal University

Dr. Serkan GÜN

Siirt University

Dr. Ahmet KARDAŞLAR

Osmaniye Korkut Ata University

Dr. Elena TINIKOVA

Russian Academy of Sciences

Dr. MA Yuzhong

Renmin University

Dr. Elvan CAFAROV

Nahçivan Üniversitesi

Dr. Bashır SALİH

Al-Jabal Al-Gharbi University – Libya

Dr. Hab. Elżbieta PATKOWSKA

University of Life Sciences in Lublin - Poland

Dr. Kazi Md. Salim Newaz

University of Malaya- Malaysia



EUROASIA

Congress on Scientific
Researches and Recent Trends-X

CONGRESS PROGRAM

February 16-17, 2023
Baku Euroasian University & IKSAD Institute

Face-to-Face Presentations: Baku Euroasian University -Baku, Azerbaijan



Meeting ID: 838 3544 5295
Passcode: 101010

IMPORTANT, PLEASE READ CAREFULLY

- ❖ To be able to attend a meeting online, login via <https://zoom.us/join> site, enter ID “Meeting ID or Personal Link Name” and solidify the session.
- ❖ The Zoom application is free and no need to create an account.
- ❖ The Zoom application can be used without registration.
- ❖ The application works on tablets, phones and PCs.
- ❖ The participant must be connected to the session 5 minutes before the presentation time.
- ❖ All congress participants can connect live and listen to all sessions.
- ❖ Moderator is responsible for the presentation and scientific discussion (question-answer) section of the session.

Points to Take into Consideration - TECHNICAL INFORMATION

- ◆ Make sure your computer has a microphone and is working.
- ◆ You should be able to use screen sharing feature in Zoom.
- ◆ Attendance certificates will be sent to you as pdf at the end of the congress.
- ◆ Requests such as change of place and time will not be taken into consideration in the congress program.

Önemli, Dikkatle Okuyunuz Lütfen

- ❖ Kongremizde Yazım Kurallarına uygun gönderilmiş ve bilim kurulundan geçen bildiriler için online (video konferans sistemi üzerinden) sunum imkanı sağlanmıştır.
- ❖ Online sunum yapabilmek için <https://zoom.us/join> sitesi üzerinden giriş yaparak “Meeting ID or Personal Link Name” yerine ID numarasını girerek oturuma katılabilirsiniz.
- ❖ Zoom uygulaması ücretsizdir ve hesap oluşturmaya gerek yoktur.
- ❖ Zoom uygulaması kaydolmadan kullanılabilir.
- ❖ Uygulama tablet, telefon ve PC’lerde çalışıyor.
- ❖ Her oturumdaki sunucular, sunum saatinden 5 dk öncesinde oturuma bağlanmış olmaları gerekmektedir.
- ❖ Tüm kongre katılımcıları canlı bağlanarak tüm oturumları dinleyebilir.
- ❖ Moderatör – oturumdaki sunum ve bilimsel tartışma (soru-cevap) kısmından sorumludur.

Dikkat Edilmesi Gerekenler- TEKNİK BİLGİLER

- ◆ Bilgisayarınızda mikrofon olduğuna ve çalıştığına emin olun.
- ◆ Zoom'da ekran paylaşma özelliğine kullanabilmelisiniz.
- ◆ Kabul edilen bildiri sahiplerinin mail adreslerine Zoom uygulamasında oluşturduğumuz oturuma ait ID numarası gönderilecektir.
- ◆ Katılım belgeleri kongre sonunda tarafınıza pdf olarak gönderilecektir
- ◆ Kongre programında yer ve saat değişikliği gibi talepler dikkate alınmayacaktır

**Before you login to Zoom please indicate your name surname and hall number,
exp. H-1, Merve KIDIRYUZ**

-Opening Ceremony-

16.02.2023

Baku Local Time: 10⁰⁰-11⁰⁰

Baku Euroasian University -Baku, Azerbaijan

Meeting ID: 838 3544 5295

Passcode: 101010

Honorary Chairman Of The Congress

Rector

Prof. Dr. Nazim HÜSEYNLİ

Head Of Organizing Committee

Baku Euroasian University

Vice Rektor

Prof. Dr. Gülzar IBRAHIMOVA

IKSAD PRESIDENT

Dr. Mustafa Latif EMEK

IKSAD General Coordinator

Dr. ELVAN CAFEROV

Participants Countries: **

17.02.2023 | HALL-6 | SESSION-3



Baku Local Time: 17⁰⁰-19³⁰



Ankara Local Time: 16⁰⁰-18³⁰

HEAD OF SESSION: Prof. Dr. Ayse AYTAC

AUTHORS	AFFILIATION	TOPIC TITLE
Onur UNLU Prof. Dr. Ayse AYTAC	<i>Hayat Kimya A.S., Department of Research and Development, Principal Researcher (Türkiye) Kocaeli University (Türkiye) Department of Chemical Engineering, (Türkiye)</i>	INVESTIGATION OF THE EFFECTS OF CALCIUM CARBONATE ADDITIVE IN PAPERMAKING
Ali ALTUN Assist. Prof. Dr. Güventürk UĞURLU	<i>Kafkas University (Türkiye)</i>	INVESTIGATION OF THE CONFORMATIONAL ANALYSIS OF (o-CARBAMOIL PHENYLE) BORONIC ACID MOLECULE BY THEORETICAL METHODS
Ali ALTUN Assist. Prof. Dr. Güventürk UĞURLU	<i>Kafkas University (Türkiye)</i>	THE STUDY OF STRUCTURE, NONLINEAR OPTICAL, VIBRATIONAL AND ELECTRONIC PROPERTIES OF (p - CARBAMOYLPHENYLE) BORONIC ACID MOLECULE
Assist. Prof. Dr. Tugce GUR MAZ	<i>Gazi University (Türkiye)</i>	EVALUATION OF INDOLE BASED CARBOXAMIDE DERIVATIVES AS SOLUBLE EPOXIDE HYDROLASE (sEH) INHIBITORS
Assist. Prof. Dr. Güventürk UĞURLU	<i>Kafkas University (Türkiye)</i>	THEORETICAL INVESTIGATION OF STRUCTURAL AND ELECTRONIC FEATURES OF (E)-4-((4- BROMOPHENYL)IMINOMETHYL)BENZONITRILE MOLECULE
Assist. Prof. Dr. Güventürk UĞURLU	<i>Kafkas University (Türkiye)</i>	THEORETICAL INVESTIGATION OF CONFORMATION ANALYSIS AND NONLINEAR OPTICAL PROPERTIES OF OROTIC ACID MOLECULE
Prof. Dr. Murat HATİPOĞLU Assist. Prof. Dr. Meltem GÜRBÜZ Lect. Başak GÜRSOY Assist. Prof. Dr. Volkan ÇİL	<i>Dokuz Eylül University (Türkiye) Mersin University (Türkiye) Dokuz Eylül University (Türkiye) Atatürk University (Türkiye)</i>	AN EXAMPLE OF CONSUMER PROTECTION IN FORENSIC- GEMOLOGY; THE DIFFERENCES BETWEEN TWO GREEN TYPES OF BERYL (Be 3 Al 2 Si 6 O 18) MINERAL WIDELY USED IN THE JEWELRY INDUSTRY (GREEN BERYL AND EMERALD) AND RAISING CONSUMER AWARENESS

EUROASIA SUMMIT

Congress on Scientific Researches and Recent Trends-10

Aghazade Shahri Adil	ELEKTRON HÖKUMƏT: İNTEQRASIYA EDİLMİŞ KONSEPTUAL ÇƏRÇİVƏ	16
Fatma İNCE SANCAKLI	GREEK STATE OF TRABZON (1204-1263)	18
Ali CENGİZ	INTERNATIONAL ECONOMIC AND SOCIAL COOPERATION UNDER THE UNITED NATIONS CHARTER	20
Gürkan AKDAĞ Aykut Göktuğ SOYLU	FOOD CULTURE IN PRE-ISLAMIC TURKISH EPICS	21
Merve Benan ASLAN Zeynep Bala DURANAY Servet TUNCER	SOLAR ENERGY POTENTIAL of TURKEY and SOLAR ENERGY APPLICATION AREAS	23
Murat HATIPOĞLU Meltem GÜRBÜZ Başak GÜRSOY Volkan ÇİL	AN EXAMPLE OF CONSUMER PROTECTION IN FORENSIC-GEMOLOGY; THE DIFFERENCES BETWEEN TWO GREEN TYPES OF BERYL (Be ₃ Al ₂ Si ₆ O ₁₈) MINERAL WIDELY USED IN THE JEWELRY INDUSTRY (GREEN BERYL AND EMERALD) AND RAISING CONSUMER AWARENESS	26
Safarova Elnura Fazil Səfərova Elnurə	MAIN PESTS OF GARDEN AND FOREST PLANTS IN ABSHERON, THEIR COMPLEX ENTOMOPHAGES	29
Vanya ZHIVKOVA	A BRIEF INSIGHT INTO SOME CURRENT ADVANCES ON PAPAYA WASTE UTILIZATION	31
Maja PUCELJ	THE POSSIBLE IMPACT OF THE BAN ON FACE VEILING ON THE QUALITY OF LIFE OF VEILED MUSLIM WOMEN: SLOVENIAN PERSPECTIVE	32
Paşa PAŞAYEV Şükrü APAYDIN	ENERGY REGION CASPIAN SEA ON THE WAY TO BECOMING A EURASIAN ENERGY CENTER	33
Maja PUCELJ	HUMAN RIGHTS PERSPECTIVE ON THE POSSIBLE IMPLEMENTATION OF THE BAN ON FACE VEILING: SLOVENIAN PERSPECTIVE	35
Nasim Forghani S Mahmoud A Najafi	INHIBITORS OF G _q SIGNALING DOWNREGULATE β-Catenin eXPRESSION AND FUNCTION IN HUMAN COLON CANCER CELLS	36
Farman Ullah Marjan Uddin	NUMERICAL SOLUTION OF VARIABLE ORDER FRACTIONAL DIFFERENTIAL EQUATION WITH VARIABLE COEFFICIENT	38
Tarsisius GAHADZIKWA	ANALYSING GLOBALISATION: SOLUTION OR PROBLEM?	39
Polina ANUFRIEVA	DIGITAL ECOSYSTEMS AS A MAIN TREND IN THE MODERN WORLD ECONOMY	40
Tamara DARSANIA Natalia GARUCHAVA	THE PRINCIPLES OF ORGANIZATION OF DIET THERAPY MANAGEMENT IN THE CLINICS AND HEALTH RESORTS IN GEORGIA	41
Mhamed HADJI Abdelkader ELHANAOU Rachid SKOURI Said AGOUNAD	EMBEDDED SYSTEM OF ACOUSTIC SIGNAL PROCESSING ON FPGA	42

**ADLİ GEMOLOJİ AÇISINDAN TÜKETİCİNİN KORUNMASI HAKKINDA BİR
ÖRNEK; MÜCEVHER SEKTÖRÜNDE YAYGINCA KULLANILAN BERİL
($Be_3Al_2Si_6O_{18}$) MİNERALİNİN YEŞİL RENKLİ İKİ TÜRÜNÜN (YEŞİL BERİL VE
ZÜMRÜT) ARASINDAKİ FARKLAR VE TÜKETİCİLERİN
BİLİNÇLENDİRİLMESİ**

AN EXAMPLE OF CONSUMER PROTECTION IN FORENSIC-GEMOLOGY; THE
DIFFERENCES BETWEEN TWO GREEN TYPES OF BERYL ($Be_3Al_2Si_6O_{18}$)
MINERAL WIDELY USED IN THE JEWELRY INDUSTRY (GREEN BERYL AND
EMERALD) AND RAISING CONSUMER AWARENESS

Prof.Dr. Murat HATİPOĞLU

Dokuz Eylül Üniversitesi, İMYO, El Sanatları Bölümü, Kuyumculuk ve Takı Tasarımı
Programı,
Dokuz Eylül Üniversitesi, Fen Bilimleri Enstitüsü, Doğal Yapı Taşları ve Süstaşları Anabilim
Dalı
ORCID: 0000-0002-4345-9052

Dr. Öğretim Üyesi Meltem GÜRBÜZ

Mersin Üniversitesi-Mersin/Türkiye, Takı Teknolojisi ve Tasarımı Yüksekokulu,
ORCID: 0000-0003-2501-0697

Öğretim Gör. Başak GÜRİSOY

Dokuz Eylül Üniversitesi, İMYO, El Sanatları Bölümü, Kuyumculuk ve Takı Tasarımı
Programı
ORCID: 0000-0002-2876-6556

Dr. Öğretim Üyesi Volkan ÇİL

Atatürk Üniversitesi-Erzurum/Türkiye, OMYO, El Sanatları Bölümü, Kuyumculuk ve takı
Tasarımı Programı
ORCID: 0000-0003-4206-7740

ÖZET

Çok eski zamanlardan beri insanoğlunun değer verdiği değerli taşlar elmas, safir, yakut, zümrüt, akuvamarin ve inci'dir. Özellikle ördekbaşı yeşilinden yeşilin hemen her tonunda oluşabilen ve esas minerali beril ($Be_3Al_2Si_6O_{18}$) olan zümrüt taşının bu çekici yeşil rengi yüzünden hemen her toplumda tüm insanlar tarafından talep görmüştür. Bununla beraber günümüzde, mücevher sektöründe yaygınca kullanılan beril mineralinin yeşil renkli iki türünün (yeşil beril ve zümrüt) olduğu birçok profesyonel satıcı ve neredeyse tüm tüketicilerin bilmediği veya farkında olmadığı bir durumdur. Bu iki türü birbirinden ayıran temel faktör beril minerali içerisine giren ve yeşil renge sebep olan periyodik cetveldeki "B" grubu bazı renk verici elementler (kromoforlar) dır. Berilyum-Alüminyum-silikat atomik bileşimine sahip beril minerali, kromoforlardan yoksun ise renksizdir ve ismi goşenit olarak ifade edilir. Kristalleşme sırasında bulunduğu jeolojik ortamda birinci olarak; Al^{+3} yerine Fe^{+3} ve V^{+3} elementleri beril içerisine yüksek oranlarda girerse, ikinci olarak; Al^{+3} yerine Cr^{+3} elementi düşük oranda girerse, kafes yapısında kristal alan dönüşümü ile berilin rengi yeşil olur. Bu

süstaşının adı hem bilimsel hem de uluslararası mücevher otoriteleri (Örg. CIBJO, GIA, IGI vb) tarafından “yeşil beril” ismiyle adlandırıldığından tüketicilere de bu isimle sunulmalıdırlar. Buna karşılık, Al^{+3} yerine yüksek oranda Cr^{+3} ve düşük oranlarda Fe^{+3} ve V^{+3} elementleri, gene kristal alan dönüşümü ile beril içerisine yüksek oranlarda girerse berilin rengi yeşil olur. Ancak bu durumda süstaşının adı hem bilimsel hem de uluslararası mücevher otoriteleri tarafından “zümrüt” ismiyle adlandırıldığından, tüketicilere de bu isimle sunulmalıdırlar. Hemen hemen tüm özellikleri aynı olan bu iki türün en pratik ayırt edilme yöntemlerinden birisi, UV-lüminesansıdır. Yeşil beriller yüksek vanadyum içerimler nedeniyle camgöbeği renkli UV ışınması gösterirken, zümrütler yüksek krom içerimleri nedeniyle kırmızı UV ışınması gösterirler. Bu fark adli gemoloji açısından önemlidir. Çünkü mücevher ticaretinde tüketicilerin aldatılmadan güvenle zümrüt taşı veya zümrütlü mücevherleri alabilmeleri için bu farkın satıcılar tarafından tüketicilere anlatılması gerekmektedir. Eğer tüketiciye bu fark anlatılmadan, ender bulunduğu için çok daha değerli olan ve bu yüzden yüksek talep gören zümrüt taşı yerine, çok daha yaygın bulunan yeşil beril satılırsa, 6502 sayılı “Tüketicinin Korunması Hakkındaki Kanun” gereği ayıplı mal satılmış olur. Bu durumda tüketici lehine hukuksal hak doğar ve bu kanunun Madde 11’de bahsedilen tüketicinin seçimsel haklarını kullanması gerekebilir.

Anahtar Sözcükler: Zümrüt, Yeşil beril, Adli-gemoloji, 6502 sayılı Tüketici Kanunu.

ABSTRACT

The precious stones that have been valued by mankind since ancient times are diamond, sapphire, ruby, emerald, aquamarine, and pearl. Due to this attractive green color of the emerald stone, which can be formed in almost any shade of green from duck-head green, and whose main mineral is beryl ($Be_3Al_2Si_6O_{18}$), it has been demanded by all people in almost every society. However, today, it is a situation that many professional sellers and almost all consumers do not know or are aware of, that there are two green-colored types of beryl mineral (Emerald and Green Beryl), which are widely used in the jewelry industry. The main factor that distinguishes these two species from each other is the "B" group in the periodic table, which enters the beryl mineral and causes the green color, some coloring elements (chromophores). Beryl mineral with atomic composition of beryllium-aluminium-silicate is colorless if it lacks chromophores and its name is expressed as goshenite. Firstly, in the geological environment in which it was found during crystallization; If Fe^{+3} and V^{+3} elements enter beryl at high rates instead of Al^{+3} , secondly; If Cr^{+3} element enters at low ratio instead of Al^{+3} , the color of beryl becomes green with the crystal field transformation in the lattice structure. Since the name of this gemstone is named as “green beryl” by both scientific and international jewelry authorities (eg. CIBJO, GIA, IGI etc.), they should be presented to consumers with this name. On the other hand, if high proportions of Cr^{+3} and low ratios of Fe^{+3} and V^{+3} elements enter beryl lattice instead of Al^{+3} , again with crystal field transformation, the color of beryl becomes green. However, in this case, since the name of the gemstone is named as "emerald" by both scientific and international jewelry authorities, they should be presented to consumers with this name. The one of the most practical distinction of these two species, which has almost all the same characteristics, is with UV-luminescence. One of the most practical methods of distinguishing these two species, which have almost all the same characteristics, is UV-luminescence. Green beryls show cyan colored UV irradiation due to their high vanadium content, while emeralds show red UV irradiation due to their high chromium content. This difference is important in terms of forensic gemology. Because in the jewelry trade, this difference should be explained to the consumers by the sellers so that the consumers can safely buy the emerald stone or emerald jewelry without being deceived. If

green beryl, which is much more common, is sold instead of emerald, which is much more valuable because it is rare and therefore in high demand, without explaining this difference to the consumer, defective goods will be sold in accordance with the "Law on the Protection of the Consumer" no. 6502. In this case, a legal right arises in favor of the consumer, and it may be necessary to use the consumer's electoral rights mentioned in Article 11 of this law.

Keywords: Emerald, Green Beryl, Forensic-Gemology, Consumer Law No:6502.