



Universitatea "Apollonia" din Iași

Universitatea "Apollonia" din Iași este guvernată prin lege, disciplină și rigoarea bunelor proceduri

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Dear participant,

A few time ago the International Congress of the "Apollonia" University of Iași, "**By promoting excellence, we prepare the future**", the XXXI edition, in online format, ended. This event enjoyed a wide participation, both through the topics discussed and through the participants. Taking into account the activities undertaken during the congress, it was noticed the academic attitude, the scientific level and the collegial atmosphere, which dominated the communication sessions, conferences and round tables.

Your involvement in these activities has fully contributed to the success of these actions and therefore we thank you for your participation at this congress.

The organizers of the congress would like to express their gratitude for the way in which you honored this important event.

Sincerely yours,

President of the „Apollonia” University from Iași

Prof.univ.dr.Vasile Burlui,



Rector,

Conf. univ. dr. Gabriela Mihalache

Dean of the Faculty of Medical Dentistry

Prof. univ. dr. Leonard I. Atanase



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SERIES B No. 000859

CERTIFICATE OF PARTICIPATION

is granted to Mr. / Ms.

*P.P. Socorro-Perdomo, N.R. Florido-Suarez, I. Voiculescu, V. Geanta,
J.C. Mirza-Rosca*

for the active participation in the section - Advanced Materials in Modern Medicine
within the International Congress "*By promoting excellence we prepare the future*" with
the poster

„New option for biomaterials of medical prosthesis and implants ”

Iași, 1st -3rd of March 2021.

President,

Prof. Vasile Burlui , PhD

Rector,

Assoc. Prof. Gabriela Mihalache, PhD

Dean,

Prof. Leonard Ionuț Atanase, PhD



NEW OPTION FOR BIOMATERIALS OF MEDICAL PROSTHESIS AND IMPLANTS

P. P. Socorro Perdomo¹, N. R. Florido Suarez¹, I. Voiculecu², V. Geante², Julia C. Mirza Rosca¹

¹Mechanical Engineering Department, University of Las Palmas de Gran Canaria,

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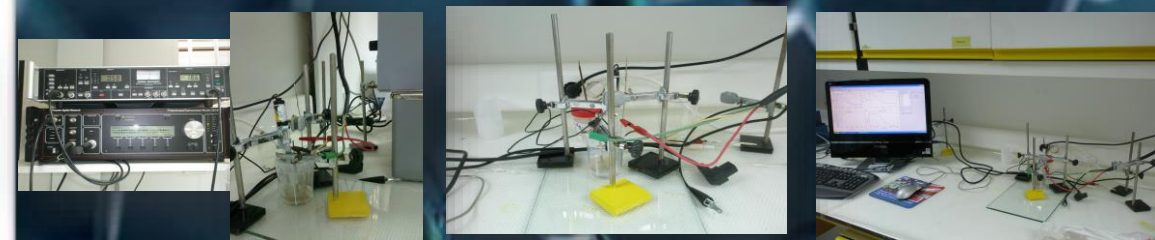
1 COMPOSITION OF THE ELEMENTS

	Wt.%					
	Mo	Ta	Ti	Zr	Nb	Fe
BioHEA 1	20.45	32.45	12.67	18.97		15.46
BioHEA 2	17.32	38.95	13.21	17.45	13.07	

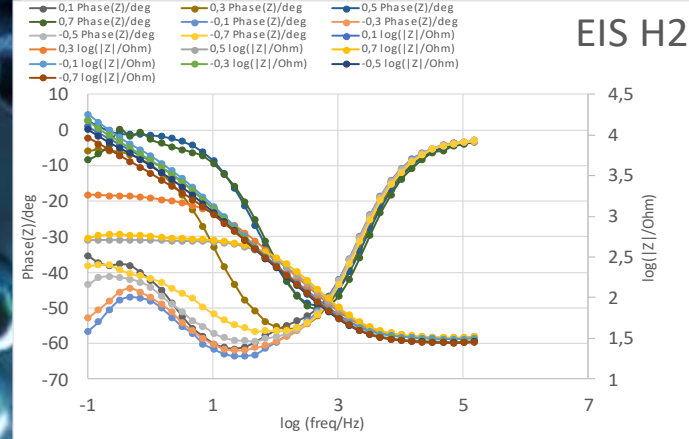
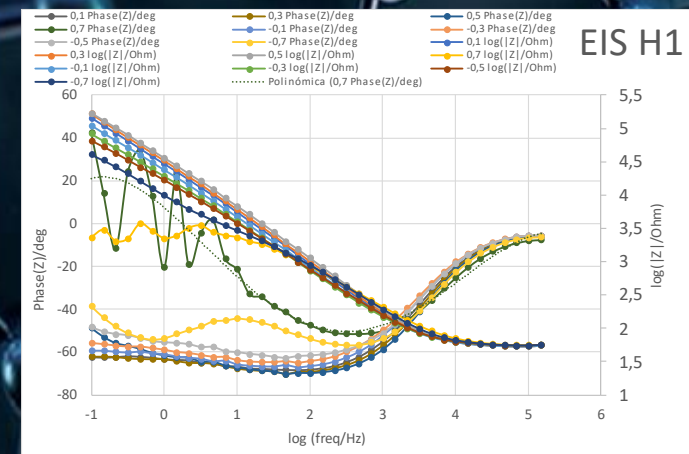
2 PRECISION CUTTING MACHINE



4 ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY TEST 3 PRESS AND METALLOGRAPHIC POLISHER



5 CHEMICAL ATTACK AND METALLOGRAPHIC ANALYSIS



CoCr alloys have been used in dentistry for porcelain-fused-to-metal crowns due to their good biocompatibility, wear resistance, long service duration, good mechanical properties and last but not least, superior corrosion. The present investigation evaluated and compared two new Co-Cr based dental alloys, studying their microstructures and corrosion behavior in Ringer solution using different techniques. The results of the study exhibit that the contact of alloys during 24-hours with Ringer's solution, from a qualitative point of view, reveals that both alloys show a high passivation tendency. The two alloys presented formation of protective layers on their surface after electrochemical treatment. The alloys showed a general corrosion behavior, homogeneous on the surface. In terms of susceptibility to corrosion, findings in this study show that all alloys investigated have a more than adequate corrosion resistance in Ringer's solution, although one of the dental alloys presented a higher corrosion resistance than the other one.

