



Transilvania  
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## Book of Abstracts

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ALPIN RESORT HOTEL, POIANA BRAŞOV, ROMANIA





THE EFFECT OF ALLOYING ELEMENTS ON THE BIOLOGIC SAFETY OF DIFFERENT NI-CR DENTAL MATERIALS FOR PROSTHODONTIC RESTORATION

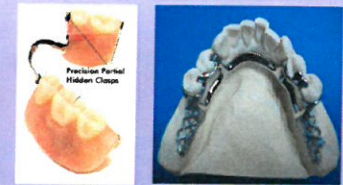
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MATERIALS

Alloys composition

Alloy	Components (wt%)							
HERAENTUM	59.3Ni	24Cr	10Mo	2Fe	1Nb			
WIRON NT	61.4Ni	22.9Cr	8.8Mo	2.5Fe	3.9Nb			
WIROLLOY	63.5Ni	23Cr	3Mo	9Fe		1Si		
V	72 Ni	20Cr		7.6Fe				
NICROMAL SOFT	64.4Ni	17.8Cr				1.8Si	9.8Cu	3.53Mn
VERASOFT	53.4Ni	14.5Cr				1.5Si	9.5Cu	19.53Mn



METHODS

METALLOGRAPHIC ANALYSIS

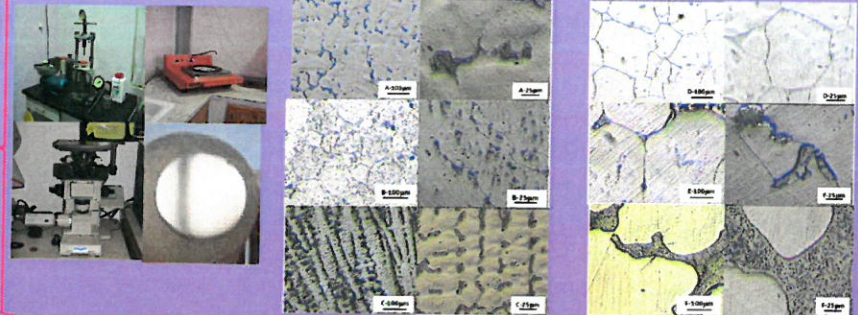
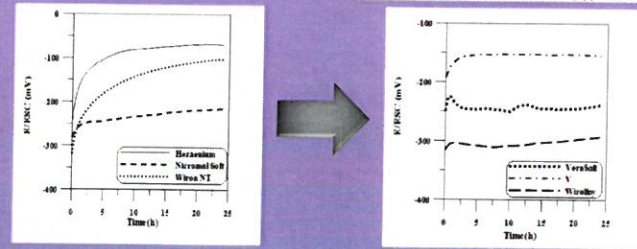
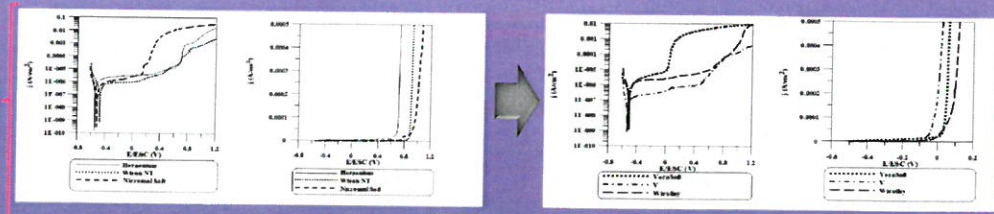


Figure 1. Metallography analysis: (A)- Heraentum alloy, (B)- WironNT alloy, (C)- Wiroloy alloy, (D)- V alloy, (E)- NicromalSoft alloy, (F)- VeraSoft alloy.

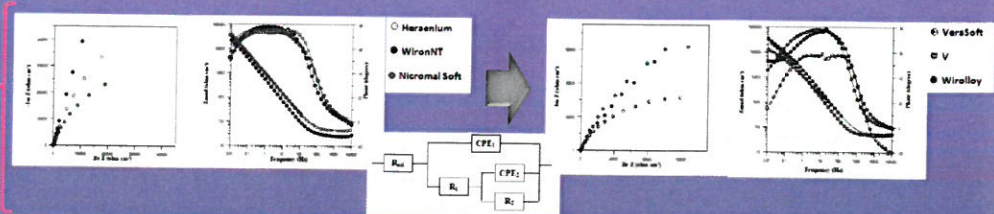
OPEN CIRCUIT POTENTIAL



POTENTIODYNAMIC POLARIZATION



ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY



- All alloys examined are under the influence of an anodic control, due to the formation of protective layers, most likely of oxide, on the surface of the alloys.  
- The alloys studied can be divided into two categories according to the type of corrosion observed.  
- In terms of susceptibility to corrosion, findings in this study show from the impedance spectra analysis that all alloys investigated have a more than adequate corrosion resistance in Ringer's solution