



REPORT

From prof. Bozhidar Ivanov Yordanov, DMD, PhD

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Regarding a defense procedure of a dissertation for acquisition of a PhD degree in the sphere of higher education 7. Healthcare and Sports, professional field 7.2 Dental Medicine, Scientific specialty Prosthetic Dental Medicine; Department of Prosthetic Dental Medicine, Faculty of Dental Medicine, Medical University – Plovdiv.

Author of the doctoral thesis: Elena Kostadinova Vasileva, DMD, assistant professor at the Department of Prosthetic Dental Medicine, Faculty of Dental Medicine, Medical University - Plovdiv.

Form of doctoral program: self-studied basis.

Title: „Comparison of two types of press ceramics with different composition of the crystalline phase“

Scientific Supervisor: prof. Angelina Vlahova, DMD, PhD, Head of the Department of Prosthetic Dental Medicine, Faculty of Dental Medicine, Medical University - Plovdiv.

General presentation of the procedure and the PhD candidate.

The present set of materials written on paper and CD corresponds to the Procedure of acquiring PhD degree in the sphere of higher education 7. Healthcare and Sports, professional field 7.2 Dental medicine, Prosthetic Dental Medicine; Scientific specialty Prosthetic Dental Medicine and includes all necessary documents.

Notes and comments on the documents:

The doctoral thesis of Dr. Vasileva contains 230 computer pages, 36 of which are bibliography and 17 are annexes. It is illustrated by 68 figures and 38 tables. There are 291 literary sources, 33 of which are written in Cyrillic alphabet.

The Author's abstract contains 59 pages, appropriately illustrated and presents in a synthesized form the main structural components of the dissertation. The content and

the quality of the author's abstract correspond to all of the requirements of the Law Act for Development of the Academic Staff in Republic of Bulgaria.

The PhD candidate has presented 4 publications, 3 conference participations and 1 (one) finished Project NO-10/2020 at MU – Plovdiv.

Evaluation of the personal participation of the PhD candidate in the dissertation

The topicality of the subject of Dr. Vasileva's dissertation is determined by the modern requirements and approaches for prosthetic treatment of patients with highly aesthetic materials and in particular ceramics based on lithium disilicate and zirconium dioxide. For the first time in our country the properties of two types of press ceramics with different composition of the crystalline phase are compared and a study of some mechanical and optical properties of press ceramics with crystalline phase of lithium silicate, reinforced with 10% zirconium dioxide. The statement that the polishing of the ceramic surface after correction cannot achieve the smoothness of the glazing is confirmed, as well as that the particle size in the composition of the ceramic material affects its properties. The excellent optical properties of lithium disilicate and lithium silicate ceramics for recreating high aesthetics have been proven.

The applied-scientific contributions in the dissertation are related to the clinical application of the studied ceramics - LSC have better possibilities for polishing than LDSC; a method for assessing the polishing ability of ceramic materials has been developed; polishing with the use of diamond paste in LSC and LDSC makes the ceramic surface smoother.

The literary survey is detailed and well systematized. The bibliography contains 291 literary sources, 33 of which are written in Cyrillic alphabet.

The aim and the tasks correspond to the selected thesis and the content of the dissertation. The aim is a logical conclusion from the analysis of the literature review. The tasks are set correctly, with clear wording and adequate in content and circumstantiality.

The selected **material** for conducting the research is appropriate and completely sufficient. The research **methods**, as well as the statistical methods for data processing, are optimally selected, applied consistently and capably used to achieve reliable results. The materials and methods for the individual tasks are clearly presented and well-illustrated.

The discussion of the results was performed correctly, separately for each of the tasks and presented as a discussion with other authors and comparison with the results of their research.

The **closing and conclusions** are formulated optimally and correspond directly with the obtained results, with an emphasis on the contributions to the dissertation. The formulated contributions and results obtained in the PhD thesis of Dr. Elena Vasileva are in general her personal merit.

Assessment of the professional and personal qualities of the PhD candidate.

In the developed scientific work the PhD candidate demonstrates methodical and analytical abilities, as well as skills for working with literary sources and experimental productions. Dr. Vasileva has the necessary theoretical knowledge and practical skills in the sphere of Prosthetic Dental Medicine and Dental Materials.

Conclusion

The dissertation of Dr. Elena Vasileva contains a number of scientifically-applied and confirmatory contributions that **fulfill all the requirements** of the Law Act for Development of the Academic Staff in Republic of Bulgaria, the Implementing regulations of LADASRB and the Regulations of MU – Plovdiv. The presented materials and dissertation results **fully comply** with the specific requirements received in connection with the Regulations of MU – Plovdiv for applying of the LADASRB.

I give my **positive assessment** for the conducted research, presented in the dissertation reviewed by me and I will vote convincingly with **YES** for awarding the educational and scientific degree “PhD” to Dr. Elena Kostadiova Vasileva.

16.10.2021

Sofia



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