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Effect of Steam Cleaning Procedure on the Physical Property of Type Ii Gypsum Product: An In Vitro Study

[1]Dr. Kumari Kalpana, [2]Dr. Samarth Kumar Agarwal, [3]Dr. Romil Singhal, [4]Dr. Prakhar Khurana, [5]Dr. Nimra Mehraj, [6]Dr. Sabeeha Hussain

[1]Post graduate Student, Department of Prosthodontics and Crown & Bridge, Kothiwal Dental College and Research Centre.Moradabad, Uttar Pradesh

[2]Professor, Department of Prosthodontics and Crown & Bridge, Kothiwal Dental College and Research Centre, Moradabad, Uttar Pradesh

[3]Professor, Department of Prosthodontics and Crown & Bridge, Kothiwal Dental College and Research Centre, Moradabad, Uttar Pradesh

[4]Post graduate Student, Department of Prosthodontics and Crown & Bridge, Kothiwal Dental College and Research Centre

[5]Senior Resident, Govt. Dental College and Hospital, Srinagar Jammu and Kashmir

[6]Senior lecturer, Department of Prosthodontics and Crown & Bridge, Seema Dental College and Hospital Rishikesh Uttarakhand.

Corresponding Author:

Dr. Prakhar Khurana, Post graduate Student, Department of Prosthodontics and Crown & Bridge, Kothiwal Dental College and Research Centre, Mora mustaqeem Kanth road Moradabad Uttar Pradesh India

Email Id: serviceheb@gmail.com

Abstract:

The success of dental prosthesis depends on its accurate fit to the supporting tissues. Gypsum Products are used as cast material. The higher the surface hardness of gypsum cast, the lower the possibility of abrasion during various steps of fabrication of a prosthesis. Important factor in the success of construction of dentures and cast crown is, having a model that is both accurate and possesses a smooth surface for fit of prosthesis. Steam cleaners are widely used in dental laboratories during various steps. The purpose of this study is to evaluate the effect of steam cleaning procedures on Type II gypsum at various duration.

Material and method-A total of 30 specimens of Type II gypsum, measuring 20 mm in diameter and 10 mm in height were fabricated. The specimen was stored at room temperature for 24 hours to dry and was divided into 3 groups- one control group and two experimental groups containing 10 specimens in each group. The specimen was steam cleaned for 30 seconds and 60 seconds at 10 cm distance, surface roughness was measured with Profilometer and statistically analysed.

Results- Significant difference ($p<0.05$) was found between surface roughness on gypsum product after steam cleaning at various time interval.

Conclusion- The steam cleaning procedure on type II gypsum increases the surface roughness.

Keywords: Type II gypsum, Profilometer, steam cleaning, surface roughness.

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