# 도재의 반복소성이 Shade에 미치는 영향

고려대학교 보건전문대학 치기공과, 대전보건전문대학 치기공과\*

Abateact

# An Experimental study on The Porcelain Shade Stability after Repeated Firing

Uoong Chul Kim, C.D.T, Boung Kee Lee\*

Dept. of Dental Laboratory Technology Junior College fo Public Health and Medical Technology, Korea University, Seoul, Korea

\* Dept. of Dental Laboratory Technology Dae Jun Junior Health college, Dae Jun, Korea

This study was performed to examine the effect of repeated firing on porcelain color stability. Sixty sepcimens of generally uniform size and shape(9.7 12mm)were prepared using the manufactorer's specifications and among them 50 specimens that showed no defect after firing procedure were selected.

All samples, abraded with sandpaper disc, ultrasonically cleaned, and air fired to amedium glaze were devided into 10 groups according to the number of repeated firing and, upon completion, mounted on a 13 by 16cm board. 30 persons(five dentists, ten dental techanicians, and fiftheen students) were asked to compare the samples for variations, in hue, chroma and value under natural and artificial light.

The results were as follows:(1) There were no color change detected in the first four firings.(2) Slight color change were noticed in subsequent firings(ie: greater decreases in value with slight increases In chroam)(3) However, the hue remained constant in all 10 groups after repeated firings.

목 차	0.2mm opaque 1.0mm body porcelain
	50
	. 50
	Carborundum stone wheel , , , 1.5mm .
	5
	glazing ( 1 ), 5
│. 서 론	( , , glazing) 1 9 10
··~ <del>-</del>	. 1
가	1 , 2
<b>/</b> 1	2,3 3
	50 5 10
	30 3 10
shade	color
condensation , particle	stability
size, firing stage,	(13 × 19cm)
, shade	30 ( 5 , 10
,	15 \
1930 Clark shade guide	,
shade selection 一連	, ,
, shade selection Mansell	·
7l (huo)	
(saturation), (value) . , Barghi	Ⅲ <b>. 실험결과</b>
shade	= 6 = 4
가	Color
shade stability 가	
, 가	1) 30
Color matching	
成敗	2) 1 4 , 4
shade stability	30
	·
	3) 5 7 30
	18
Ⅱ <b>. 실험재료 및 방법</b>	4) 8 10 30
——————————————————————————————————————	26
同形 60	5) 1 10
	30
(0.3mm) non-	•
procious metal plate(9.7 x 12mm)	

#### Ⅳ.고 안

가

shade 7 shade 37 .

Jorgenson color stability the the thickness フト Hodson grinding フト フト

가 가 , shade 가 .

## ∨. 결 론

shade stability

1. 4
shade 기
2.5
가 가 가 가

가가

3. 10 가 .

### 참 고 문 헌

- Johnston, J. F., Mumford, G., and Dykema, R.
   W.: Modern Practice in Dental Ceramics, Philadelphia, 1967, W. B. Saunders Company, chap.
   1, pp. 6-12; chap. 3, pp. 23-34.
- Phillips, R. W.: Skinner's Science of Dental Materials, ed. 7, Philadelphia, 1969, W. B. Saunders Company, pp. 534-537.
- Clark, E. B.: Tooth color selection, JAm Dent Assoc 20: 1065, 1933.
- American Society for Testing and Materials, Designation: D1535: Standard Method of Specifying Color by the Munsell System, Pennsylvania, ASTM, 1968.
- Nasser Barghi and Joel Goldberg: Porcelain shade stability after repeated firing, J. PROSTHET.
- Preston, J. D.: Color in Fixed Prosthodontics,
   A Therapeutic Project in the Manual Arts Therapy Section, Rehabilitation Medicine Service,
   V. A. Wadsworth Hospital Center, Los Angeles,
   Calif.
- Jorgenson, M. W. and Goodkind, Richard, J.: Spectrophotometric study of five porcelain shades relative to the dimensions of color, porcelain thickness, and repeated firings, J. Prosthet. Dent. 42: 96-105, 1979.
- 8. Hemmendinger, H.: Color Measurement Laboratory, Belvidere, N. J., 1978.
- McLean, J. W.: The Science and Art of Dental Ceramics. Louisiana State University, School of Dentistry, Continuing Education Program, 1975.
- Hodson, J. T.: Some physical properties of three dental porcelain, J. PROSTHET. DENT. 9: 325-335, 1959.