

# **PRACTICAL CLINICAL COURSES**

A Service of the Gordon J. Christensen  
Career Development Program

## **V1947 Light Curing Resin for Fast Custom Trays and Repairs**

Gordon J. Christensen, DDS, MSD, PhD

### **Materials Included**

C.E. Instruction Sheet  
Products List  
Clinician Responsible  
Goals & Objectives  
Overview  
References  
AGD Post-Test

**Gordon J. Christensen**  
**PRACTICAL CLINICAL COURSES**

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Gordon J. Christensen  
**PRACTICAL CLINICAL COURSES**

*Sources of Products Discussed in*

**V1947 Light Curing Resin for Fast Custom Trays and Repairs**

Presented by: Gordon J. Christensen, DDS, MSD, PhD

1. **Brasseler Burs**  
Brasseler USA  
One Brasseler Boulevard  
Savannah, GA 31419  
(800)841-4522  
(912)925-8525  
[www.brasselerusa.com](http://www.brasselerusa.com)
2. **COE-SEP Tinfoil Substitute**  
GC America, Inc.  
3737 West 127<sup>th</sup> Street  
Alsip, IL 60803  
(800)323-3386  
(708)597-0900  
[www.gcamerica.com](http://www.gcamerica.com)
3. **Custom Tray Material**  
Henry Schein, Inc.  
Corporate Headquarters  
135 Duryea Road  
Melville, NY 11747  
(800)582-2702  
(631)843-5500  
[www.henryschein.com](http://www.henryschein.com)
4. **Fit Checker**  
GC America, Inc.  
3737 West 127<sup>th</sup> Street  
Alsip, IL 60803  
(800)323-3386  
(708)597-0900  
[www.gcamerica.com](http://www.gcamerica.com)
5. **Hygienic Base Plate Wax  
Medium Soft Pink #3**  
Coltene/Whaledent  
235 Ascot Parkway  
Cuyahoga Falls, OH 44223  
(800)221-3046  
(330)916-8800  
[www.coltenewhaledent.com](http://www.coltenewhaledent.com)
6. **Jet Acrylic Liquid**  
Lang Dental Mfg. Co., Inc.  
175 Messner Drive  
P.O. Box 969  
Wheeling, IL 60090  
(800)222-5264  
(847)215-6622  
[www.langdental.com](http://www.langdental.com)
7. **Lab Knife**  
Buffalo Dental Mfg. Co., Inc.  
159 Lafayette Drive  
P.O. Box 678  
Syosset, NY 11791-0678  
(800)828-0203  
(516)496-7200  
[www.buffalodental.com](http://www.buffalodental.com)
8. **Premier Sideless Triple Tray**  
Premier Dental Products Co.  
1710 Romano Drive  
Plymouth Meeting, PA 19462  
(888)670-6100  
(610)239-6000  
[www.premusa.com](http://www.premusa.com)
9. **Snap Stone**  
Whip Mix Corporation  
361 Farmington Avenue  
P.O. Box 17183  
Louisville, KY 40217  
(800)626-5651  
(502)637-1451  
[www.whipmix.com](http://www.whipmix.com)
10. **SternTek Custom Tray  
Material**  
Sterngold, LLC  
23 Frank Mossberg Drive  
Attleboro, MA 02703-0967  
(800)243-9942  
(508)226-5660  
[www.sterngold.com](http://www.sterngold.com)
11. **Triad Visible Light Cure  
System**  
Dentsply Prosthetics  
Ceramco-Trubyte-Austenal  
570 West College Avenue  
P.O. Box 872  
York, PA 17405  
(800)243-1942  
(717)845-7511  
[www.trubyte.dentsply.com](http://www.trubyte.dentsply.com)

***Product names, the products themselves, and company names change rapidly. Please contact the companies shown to confirm current information.***

Gordon J. Christensen Practical Clinical Courses, 3707 North Canyon Road, Suite 3D, Provo, UT 84604  
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## **PROGRAM**

### **V1947 Light Curing Resin for Fast Custom Trays and Repairs**

#### **CLINICIAN RESPONSIBLE:**

**Gordon J. Christensen, DDS, MSD, PhD**  
CEO, Practical Clinical Courses  
CEO, CR Foundation  
Practicing Prosthodontist, Provo, Utah

#### **GOALS & OBJECTIVES**

On completion of this video, viewers should be able to:

1. Describe the advantages of visible light cure resins (VLC resins).
2. List the potential uses for VLC resins.
3. Discuss use of staff for doing VLC resin procedures.
4. Compare VLC resins with other alternative methods for impression trays, bite blocks, relines and other potential VLC uses.
5. List the limitations of VLC resins.
6. List three example brands of VLC resin.
7. Describe the composition of VLC resins.
8. List the steps in making VLC resin impression trays for crowns or fixed prostheses.
9. Describe when VLC resin custom trays are most indicated for fixed prosthodontics.
10. List the steps in making VLC resin impression trays for complete dentures.
11. List the steps in making VLC resin impression trays for removable partial dentures.
12. Describe making denture repairs with VLC resin.
13. Compare the strength of VLC resin with auto-cure poly methyl methacrylate.
14. Describe the clinical technique for using VLC resins for placing a post dam on a denture.
15. Describe the clinical technique for using VLC resin for relining a removable partial denture.
16. Describe the clinical technique for using VLC resin for relining a complete denture.
17. Compare use of VLC resin with methyl methacrylate or ethyl methacrylate for chairside denture relines.
18. Discuss making provisional restorations for crowns or fixed prostheses with VLC resin.
19. List the steps in making custom fitted occlusion rims (bite blocks) with VLC resin.
20. Describe making esthetic upgrades of removable prostheses with VLC resin.

## OVERVIEW

### **V1947 Light Curing Resin for Fast Custom Trays and Repairs**

The purpose of this presentation is to provide an introduction to the use of visible light curing resin for several clinical and laboratory procedures and to provide enough information for interested clinicians or laboratory technicians to accomplish several of the procedures with VLC resin. The following and other topics are included in the presentation:

1. Why use visible light curing resins?
2. Uses for visible light cure resins
3. Team members using visible light curing materials
4. Comparison of light curing resin material techniques with other alternatives
5. Limitations of visible light curing resins
6. Example brands of visible light curing material
7. Composition of visible light curing resins
8. Impression trays for fixed prosthodontics
9. Impression trays for complete dentures
10. Impression trays for removable partial dentures
11. Denture repairs
12. Replacing a tooth in a denture
13. Placement of a post dam
14. Relining a removable partial denture
15. Relining a complete denture
16. Provisional crowns and fixed prostheses
17. Occlusion rims (bite blocks)
18. Esthetic and functional upgrades of prostheses

## REFERENCES

### **V1947 Light Curing Resin for Fast Custom Trays and Repairs**

1. Dar-Odeh NS, Harrison A, Abu-Hammad O. An evaluation of self-cured and visible light-cured denture base materials when used as a denture base repair material. *J Oral Rehabil* 1997;24:755-60.
2. Khan Z, Razavi R, von Fraunhofer JA. The physical properties of a visible light-cured temporary fixed partial denture material. *J Prosthet Dent* 1988;60:543-5.
3. Sinasi YS, Sarac D, Kulunk T, Kulunk S. The effect of chemical surface treatments of different denture base resins on the shear bond strength of denture repair. *J Prosthet Dent* 2005;94:259-66.
4. Razavi R, Khan Z, Fraunhofer JA. The bond strength of a visible light-cured relines resin to acrylic resin denture base material. *J Prosthet Dent* 1990;63:485-7.
5. Andreopoulos AG, Polyzois GL, Demetriou PP. Repairs with visible light-curing denture base materials. *Quintessence Int* 1991;22:703-6.
6. Dixon DL, Eksrand KG, Breeding LC. The transverse strengths of three denture base resins. *J Prosthet Dent* 1991;66:510-3.
7. Anusavice KJ, Phillips RW. *Phillip's science of dental materials* 11<sup>th</sup> edition. WB Saunders: Philadelphia; 2003. pp. 237-71.
8. Ward JE, Moon PC, Levine RA, Behrendt CL. Effect of repair surface design, repair material and processing method on the transverse strength of repaired acrylic denture resin. *J Prosthet Dent* 1992;67:815-20.

## POST-TEST

### **V1947 Light Curing Resin for Fast Custom Trays and Repairs**

1. Visible light cure resins as discussed in this video are:
  - a. Poly methyl methacrylate.
  - b. Poly ethyl methacrylate.
  - c. Bis-GMA.
  - d. Urethane dimethacrylate.
  
2. Visible light curing resins as presented in this video can be used for:
  - a. facings for cast metal crowns.
  - b. repairs for fractured ceramic crowns.
  - c. custom impression trays for fixed and removable prosthodontics.
  - d. all of the above.
  
3. Custom trays provide:
  - a. homogeneous thickness of impression material.
  - b. reduction in impression material cost of about 50%.
  - c. superior accuracy and stability related to stock trays.
  - d. all of the above.
  
4. Light cure resins as described in this video are \_\_\_\_\_ poly methyl methacrylate denture base materials.
  - a. stronger than
  - b. weaker than
  - c. the same strength as
  - d. stronger only if placed in a water bath after curing
  
5. Custom VLC impression trays for crowns and fixed prostheses were recommended for:
  - a. all crowns and fixed prostheses.
  - b. for 3 or more units of crowns or fixed prostheses.
  - c. for 4 or more units of crowns or fixed prostheses.
  - d. for full-mouth rehabilitations only.
  
6. It was suggested that custom VLC trays for complete dentures should be extended:
  - a. to the mucobuccal fold.
  - b. short of the mucobuccal fold by 3 mm.
  - c. short of the mucobuccal fold by 2 mm.
  - d. short of the mucobuccal fold by 4 mm.
  
7. Occlusal “stops” are placed in trays for fixed prostheses to:
  - a. allow accurate seating of the tray.
  - b. ensure that prepared teeth touch the tray.
  - c. allow freedom in seating of the tray.
  - d. all of the above.

**POST-TEST (CONT'D)**

**V1947 Light Curing Resin for Fast Custom Trays and Repairs**

- 8. It was suggested that when making trays for complete dentures:
  - a. the cast should have 2 layers of base plate wax placed as relief before making the tray.
  - b. the cast should not be relieved.
  - c. there is no need to block out undercuts.
  - d. the tray handle should come straight forward from the tray.
  
- 9. To assist bonding VLC resin to cured denture base material \_\_\_\_\_ was suggested as a bonding agent.
  - a. methyl methacrylate liquid
  - b. acetone
  - c. chloroform
  - d. alcohol
  
- 10. Use of VLC resins in your practice can:
  - a. save money.
  - b. increase accuracy of restorations.
  - c. save time spent on clinical and laboratory procedures.
  - d. all of the above.

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