



How well does your curing light perform?



Your curing light may be on, but is it doing its job? Bluelight Analytics and 3M have teamed up to provide the evidence-based information you need to be confident in the predictable performance of your curing light for the restorative materials used in your clinic. Choose the NIST-traceable Bluelight CheckMARC® service to have a trained representative evaluate your light curing materials and protocols, or purchase the new Bluelight CheckUp Radiometer as a complimentary solution to the CheckMARC solution.

By giving your curing light a routine checkup, you can help ensure positive outcomes – and the positive patient reviews that come with a successful restoration.

Fast facts about light curing

- Every brand and shade of light-cured composite requires a specific "dose" of blue light to polymerize.
- Under-curing (incomplete polymerization) leads to increasing clinical problems^{1,2} such as fracture, secondary decay, de-bonding, discoloration and post-op sensitivity.
- Over-curing risks heat damage and injury.

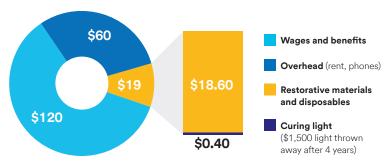
Light curing improvement opportunities

A study³ of 915 curing lights in 422 dental clinics found that **66%** needed to modify their light curing protocols – or get a new curing light – in order to reduce recall rates:

- 30% delivered less than half of the energy dose required for the selected dental material when curing a posterior restoration.
- 43% used extended curing times (to ensure an adequate cure), unknowingly risking heat damage.
- Curing times ranged from 3–90 seconds, regardless of the material selected by the dentist.
- More than 40% of curing lights had outputs ± 20% or more outside specifications.⁴

Illustrative costs in a \$200 filling*

Curing lights may be just a fraction of your overhead, but half of all dental income⁵ relies on the successful use of light-cured dental materials.





CheckMARC Service

You request the test – we'll do the rest. A 3M representative will visit your clinic and work with you to identify evidence-based opportunities to improve clinical outcomes and patient satisfaction.

This NIST-traceable professional service will:

- ✓ Determine the required curing times for your dental materials
- Test the performance of your curing lights compared to manufacturer specifications and clinically relevant scenarios
- Evaluate the curing protocols currently in practice
- Deliver a custom report on curing times, heat management techniques and other insights for you to use as a reference

How does the test work?

- Spectrometer-based test accurate to within 2% of an Integrating Sphere: the gold standard in laboratory equipment⁶
- Accounts for active diameter, wavelength and saturation for maximum accuracy
- Calibrated to work with all major lights on the market

Find illuminating answers:

- How does my curing light perform compared to manufacturer specifications?
- Can my current light properly cure a larger restoration (e.g. 6mm diameter) when used intraorally at a clinically relevant distance (e.g. 6mm away from the light tip)?



Perform your own curing light checkups on your own schedule. This smart radiometer and the paired app will give you the information you need to match your curing times to the materials in use.

This do-it-yourself curing test will allow you to:

- ✓ Input your light models and materials
- ✓ Review test results and calculated curing times
- Access the light and material IFU library
- ✓ Get personalized insights to optimize your curing protocols
- ✓ Get in-app support and education
- Engage your team in best practices

How does the test work?

- Smart radiometer uses artificial intelligence and an extensive database of light curing data
- ✓ Accurately measures different light modes like ramp and pulse
- ✓ Accounts for active diameter, wavelength and saturation
- ✓ Calibrated to work with all major curing lights on the market

See the results:

- CheckUp can calculate optimal curing times for any combination of light and material
- Perform regular testing to monitor the health of your curing lights and get better results for your restorations^{7,8}

Ready to trust your curing light again?

Contact your 3M representative to book the CheckMARC service or purchase the CheckUp Radiometer by visiting bluelightanalytics.com/buy-checkup and use coupon code 3MCHECKUPS for \$200 off your order.

- 1. American Dental Association. (2013). Professional Product Review: Effective Use of Curing Lights A Guide for the Dental Practitioner. 8(2).
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- 4. Curing Light Output Specifications Compared to Measured Output at 439 Dental Offices. Christoferson C, Ferracane J, Felix C, J Dent Res (Spec Iss A). Retrieved from: https://iadr.abstractarchives.com/abstract/15iags-2120917/curing-light-output-specifications-compared-to-measured-output-at-439-dental-offices.
- 5. American Dental Association. (2007). 2005-06 Survey of Dental Services Rendered. 1–181. American Dental Association. (2013). Survey of fees. Retrieved from: http://www.toothnature.com/2013/07/survey-average-fee-charged-by-dentists.html) Dental Revenue in the US. (2013). Retrieved from: http://www.statista.com/statistics/296642/revenue-dentists-in-the-us/). 6. (2015). Robust spectrometer-based methods for characterizing radiant exitance of dental LED light-curing units. Dental Materials, 31(4), 339–50.
- 7. Stansbury J (2007) Curing Dental Resins and Composites by Photopolymerization. JERD 12(6):300-308.
- 8. Dental light-curing units: An American Dental Association Ćlinical Evaluators Panel survey (2020) JADA 151(7) 544-545, 545.e1-2.



3M Oral Care 2510 Conway Avenue St. Paul, MN 55144-1000 USA

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