

# Effect of translucent zirconia thickness on light and dual-cured resin cement

## Background

While zirconia is still being developed, choosing the most appropriate choice of cement is still inconclusive.

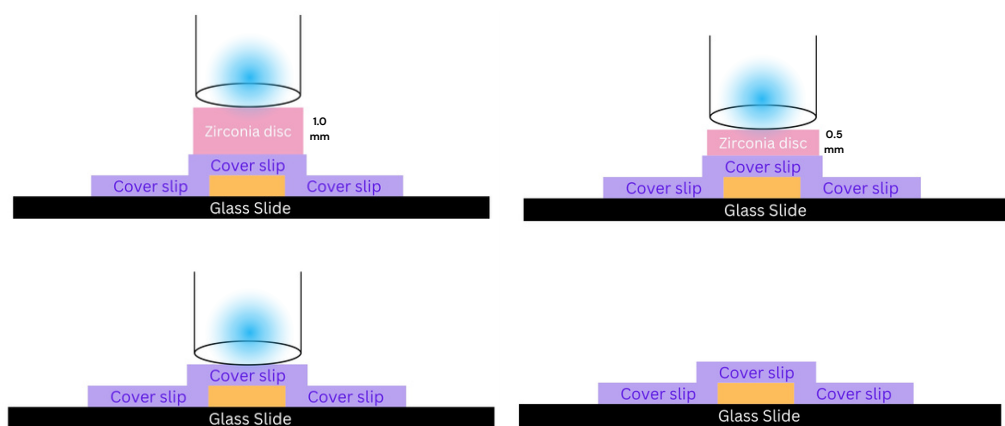
## Keywords

Zirconia ceramic, Resin cement, Degree of conversion

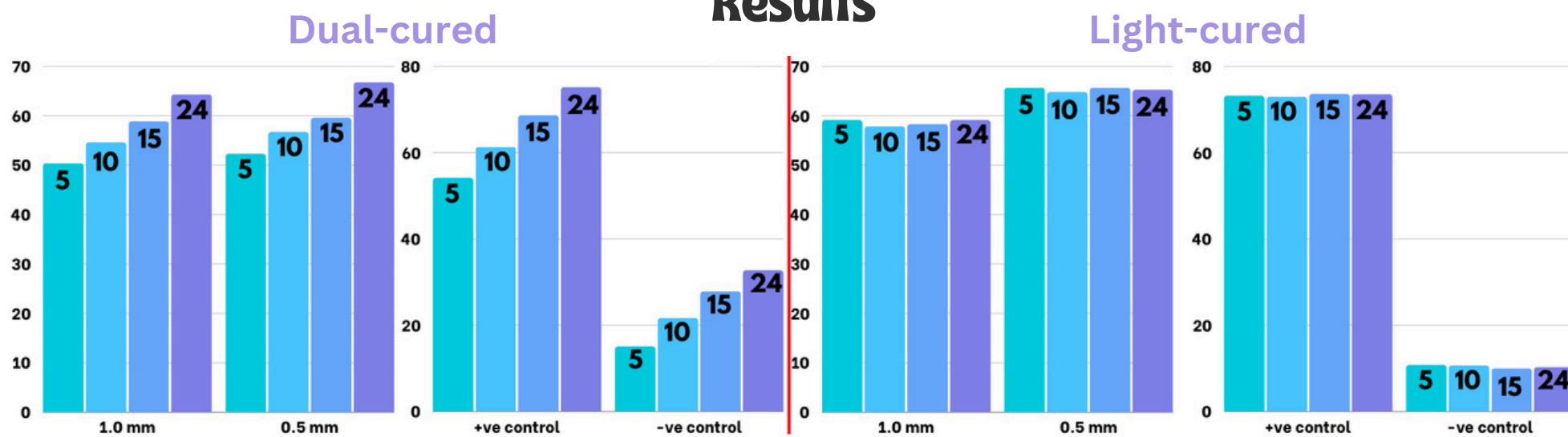
## Objective

This study aims to evaluate the degree of conversion of light-cured and dual-cured resin cement polymerized under translucent zirconia (5Y-PSZ) of different thicknesses after different post-polymerization time.

## Materials and methods



## Results



From results, decreasing the thickness of zirconia leads to increased DC. The thickness of zirconia significantly influenced the DC ( $p < 0.05$ ) of the light-cured resin cement while the DC of dual-cured increased with no significant difference ( $p > 0.05$ ).

The DC value measured at different post-curing time showed significant difference between dual-cured and light cured resin cement for all groups except for 15 mins post-curing time that showed no significant difference. 5 mins, 10 mins and 15 mins had higher DC value of light-cured resin cement but 24 hours post-curing time had more DC value for dual-cured resin cement.

Dual-cured resin cement had significant difference in every group while light-cured resin cement showed no significant difference.

## Data Analysis

Kolmogorov Smirnov test

Two way anova repeated

Tukey's post hoc test, LSD

## Conclusion

- Post-curing time increase → DC increase
- Zirconia thickness increase → DC decrease
- DC of light-cured resin cement > DC of dual-cured resin cement overtime
- At 24 hrs dual-cured resin cement exhibits a higher DC



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