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Influence of Adhesives on Color Stability of Bulk Fill Restorations



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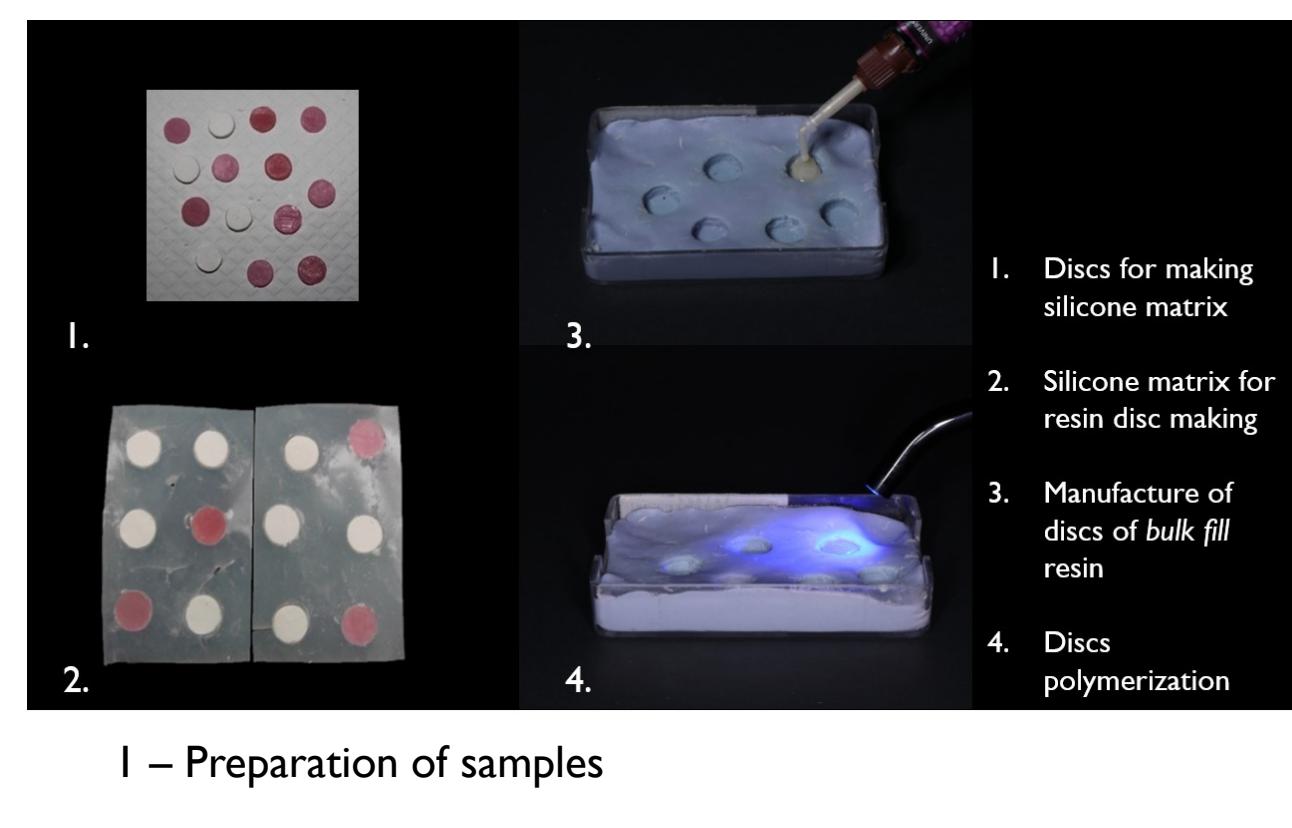
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01. OBJETIVE

Evaluate the influence of different adhesive systems on the colorimetric alteration of bulk fill resins.

02. METHODS

210 composite discs (UD3 Hri Enamel Plus, Micrium, Itália) (fig 1)
 Silicone mold (Registrado Clear, VOCO, Germany)
 Discs of 10x2 mm



Group 1 (n=30): Application of Clearfil SE Bond 2 (Kuraray, Japan)
 Group 2 (n=30): Application of Futurabond NR (VOCO, Germany)
 Group 3 (n=30): Application of Optibond XTR (Kerr, USA)
 Group 4 (n=30): Application of Clearfil Universal Bond (Kuraray, Japan)
 Group 5 (n=30): Application of Futurabond U (VOCO, Germany)
 Group 6 (n=30): Application of One Coat 7 Universal (Coltene, Switzerland)
 Group 7 (n=30): Without adhesive (Control) (fig 2)

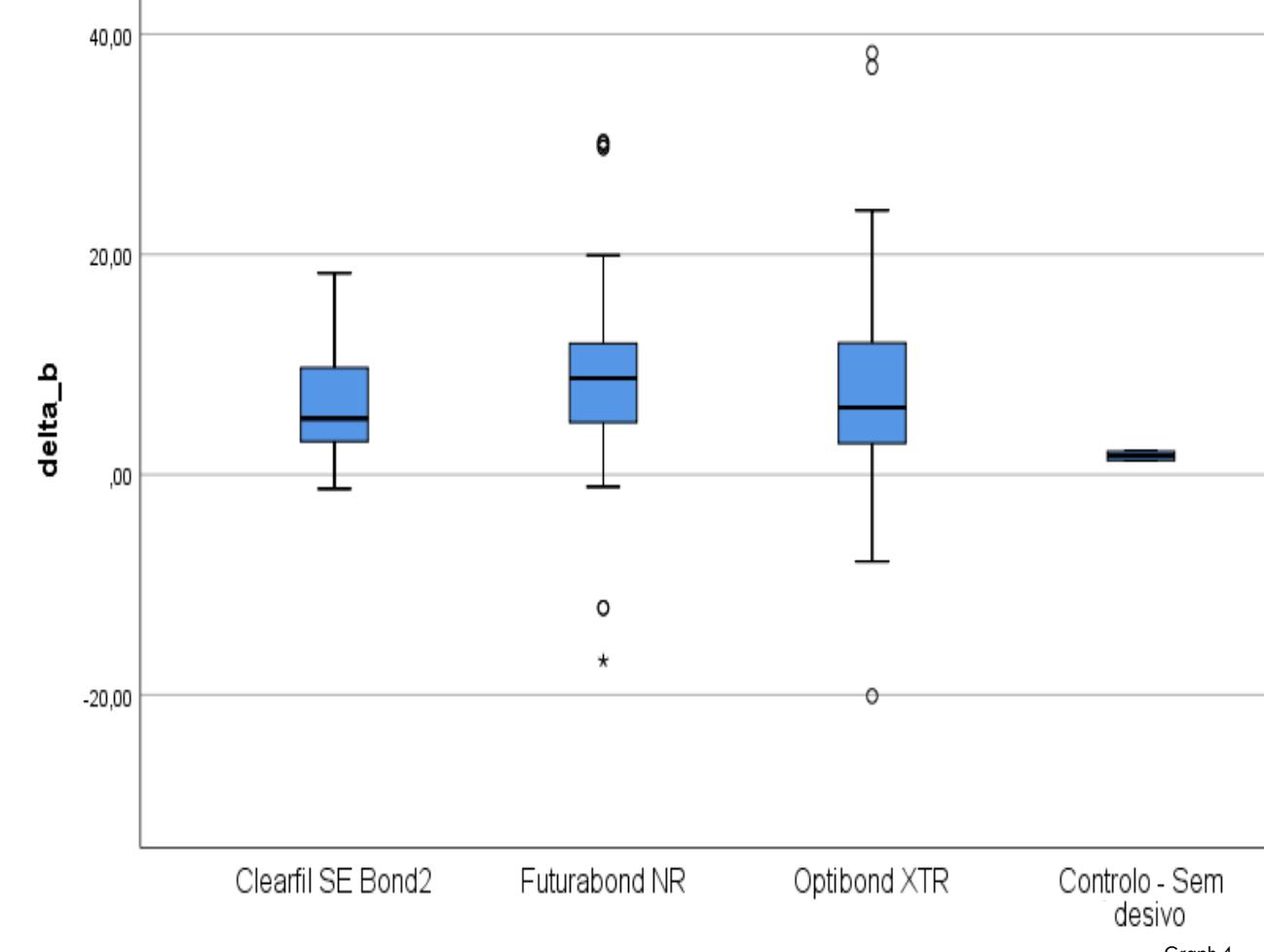
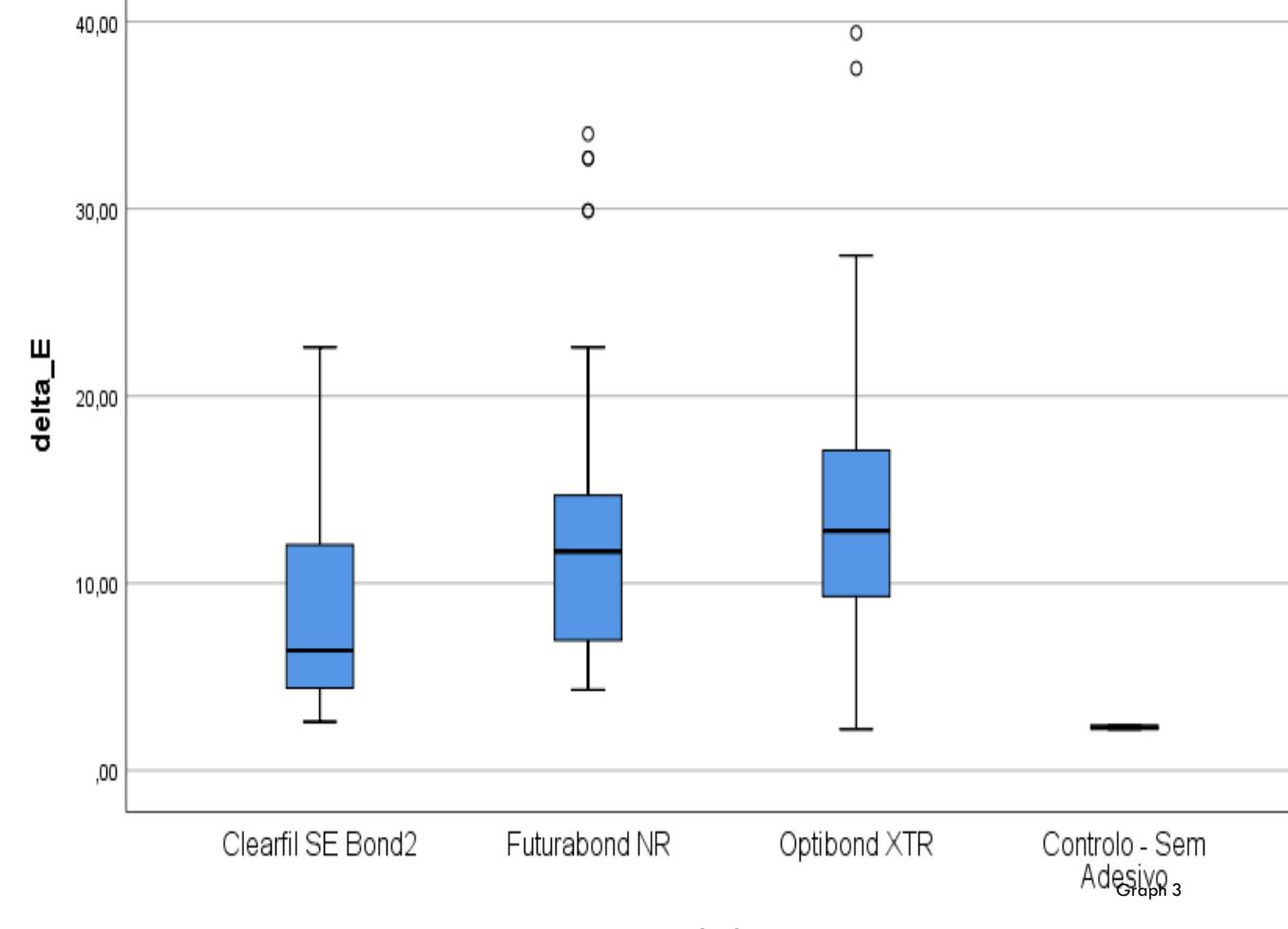
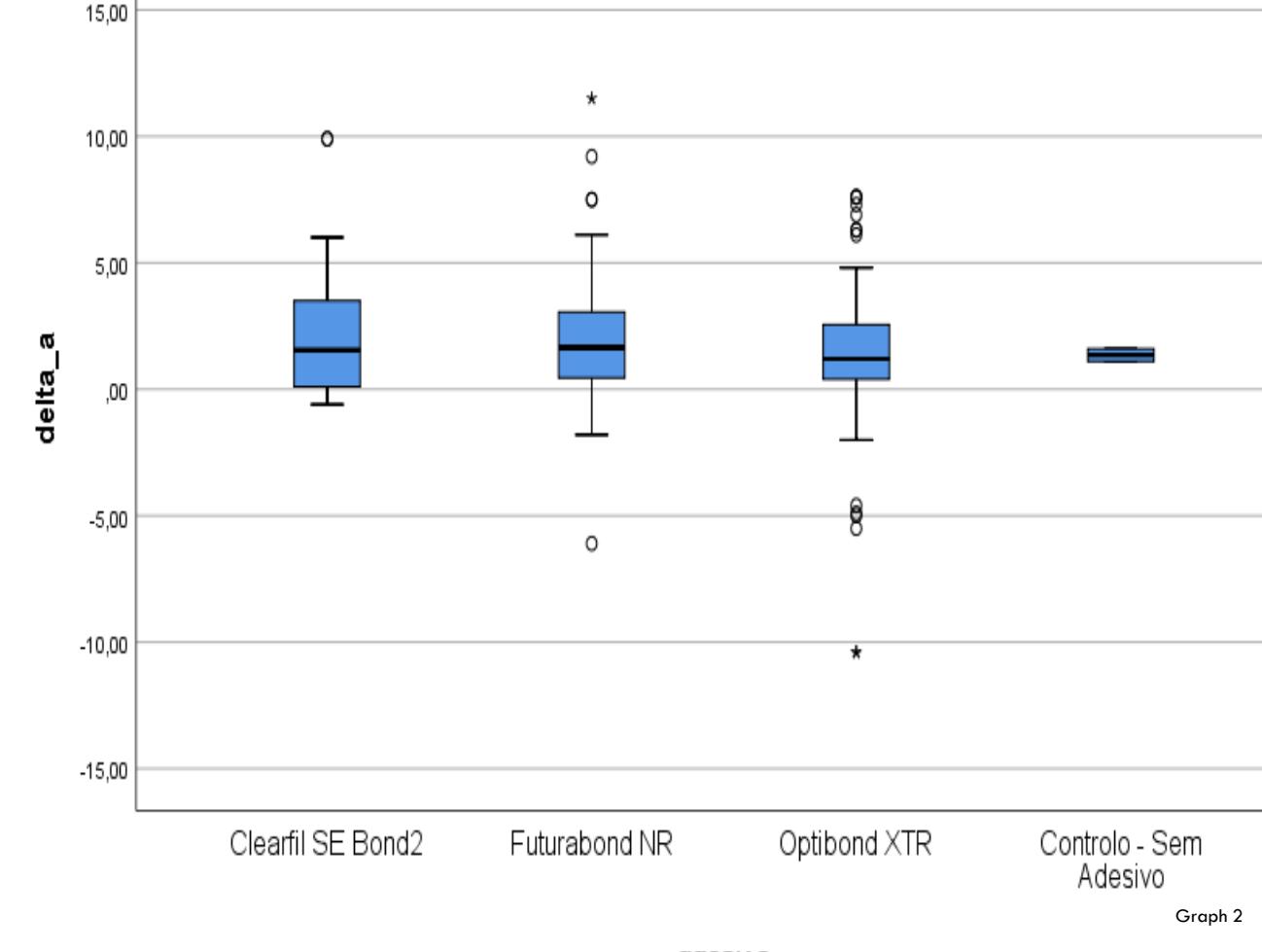
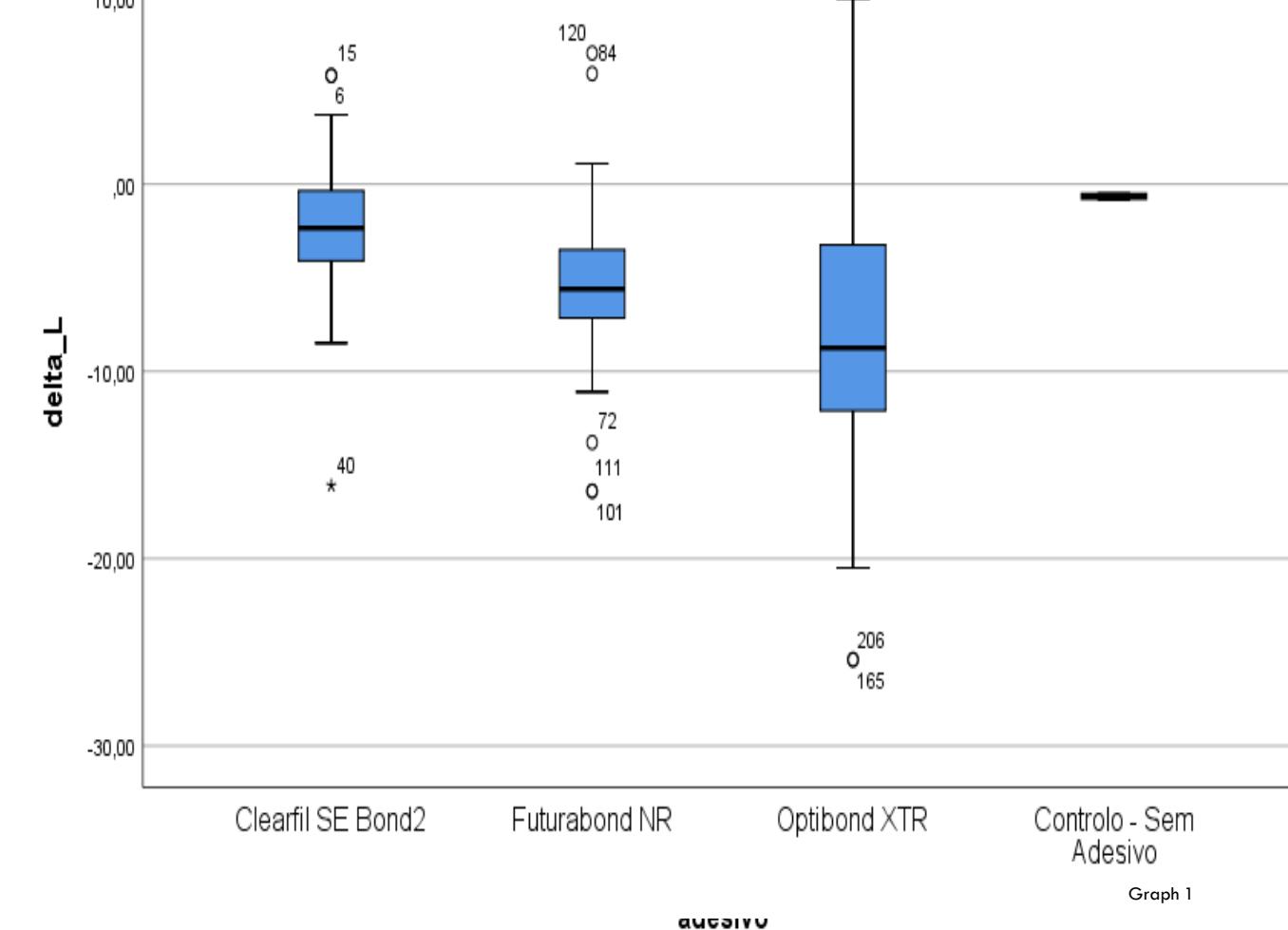
420 discs of bulk fill resin (fig 3)
 A (n=120): Fill-Up (Coltene, Suíça)
 B (n=120): Xtra-Fill (VOCO, Alemanha)

Colorimetric evaluation (day 0, day 15 and day 30) (fig 4)
 Placement of the group 1 to 6 in dye solution
 Placement of the group 7 in artificial saliva

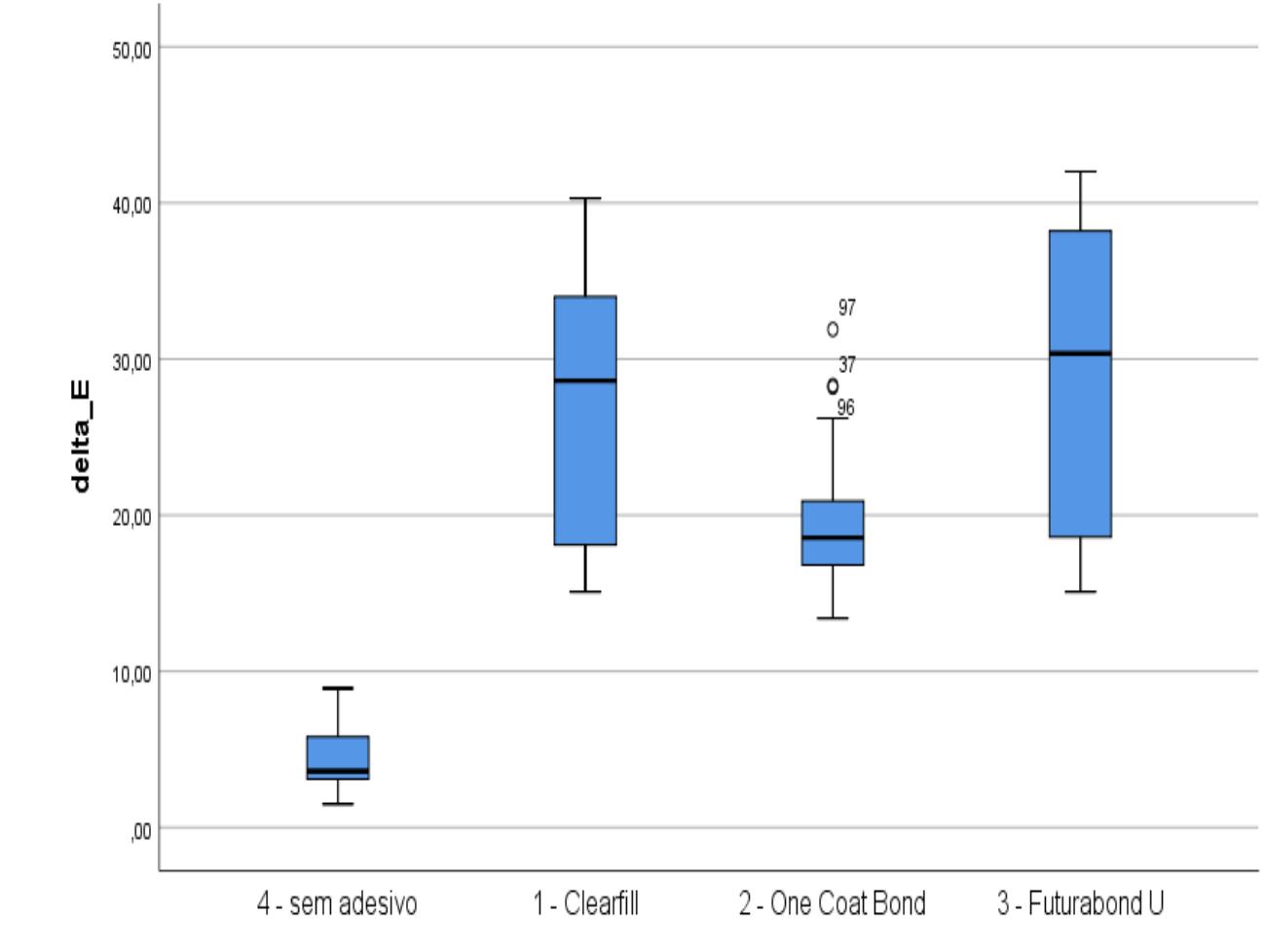
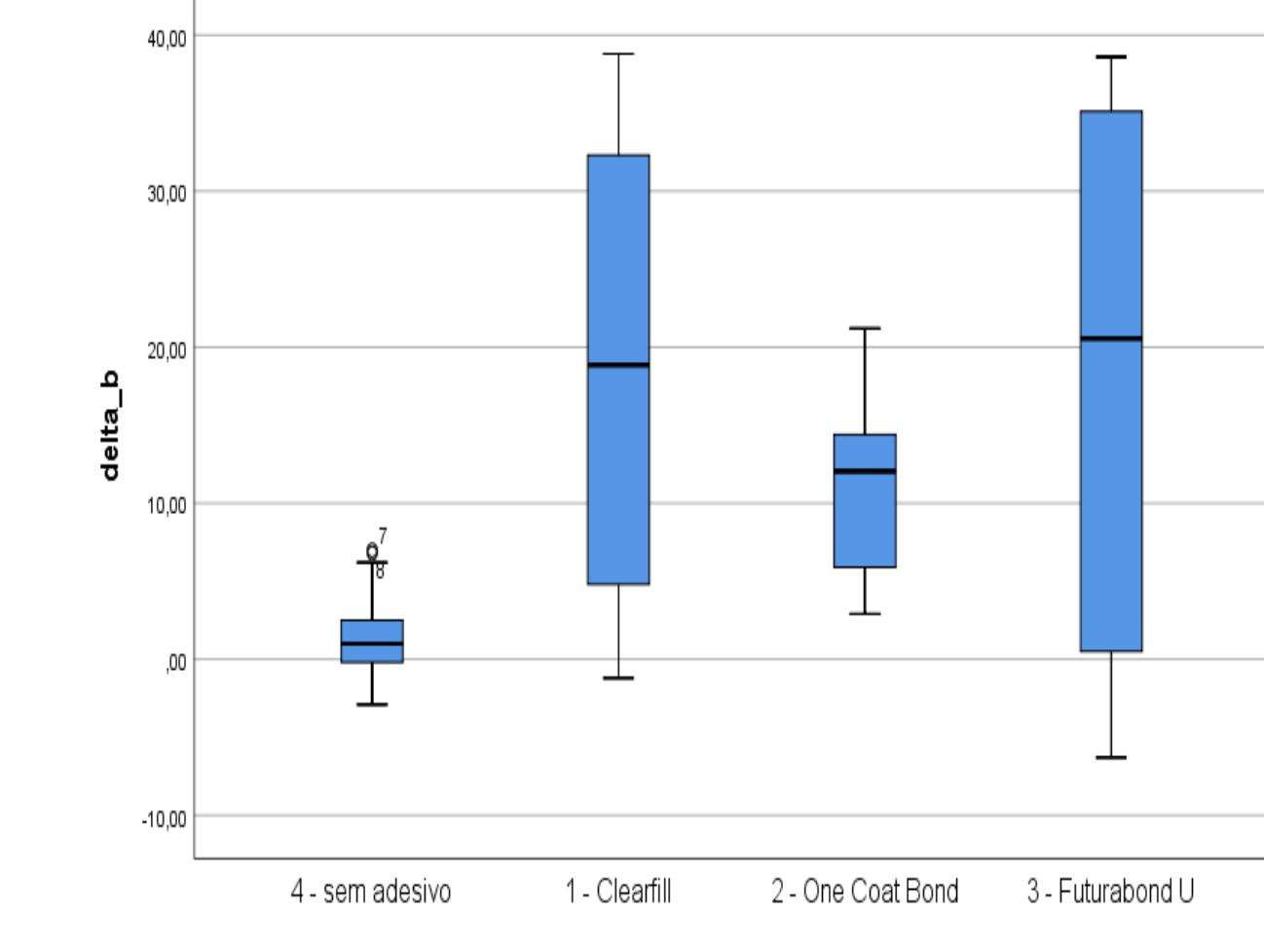
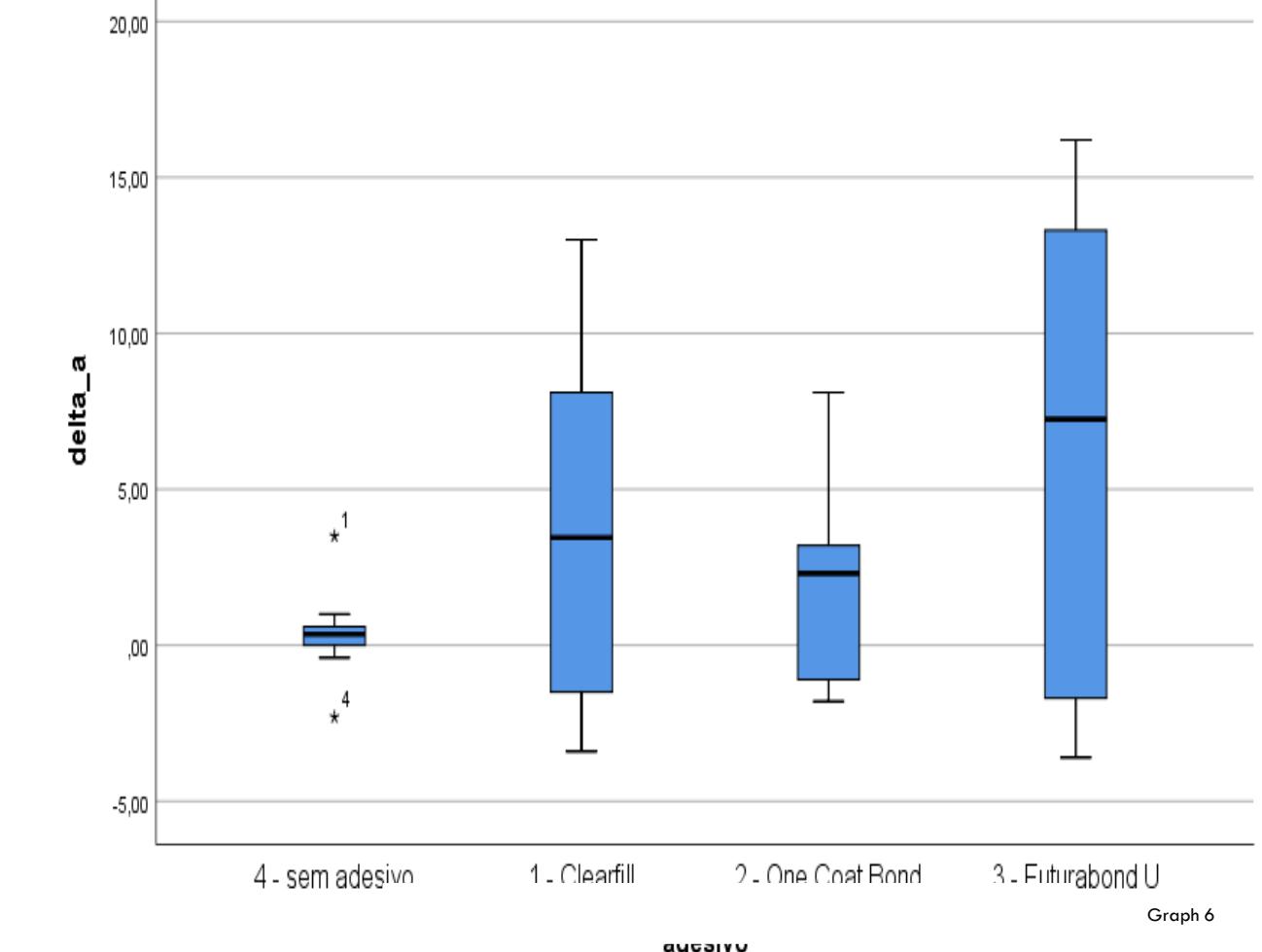
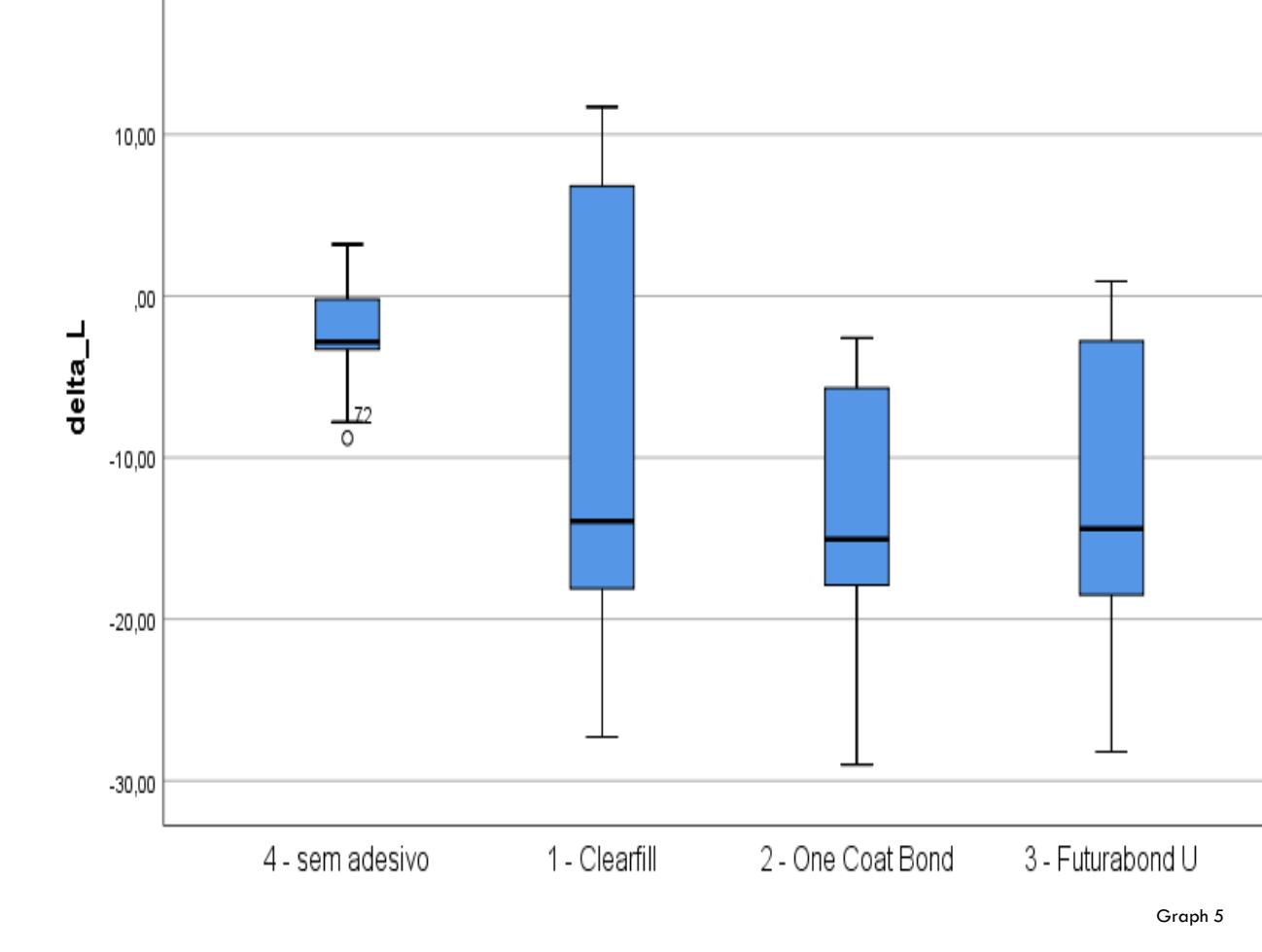
SPSS® v.25.0 (Statistical Package for the Social Sciences, IBM, EUA).
 For all the tests, p≤0,05 was used statistically.

03. RESULTS

- After both periods (15 and 30 days): decrease of ΔL^* and increase of Δb^* .
- After 30 days between all adhesives - $p<0,0005$ except between Optibond XTR and Futurabond NR ($p = 0,120$).



- Self etch adhesives: smaller variation against the universal group.
- Clearfil SE Bond 2: lower ΔE
- Futurabond NR: lowest variation of results
- Xtra-Fill: no significant variation of results ($p=0,07$)



04. CONCLUSIONS

When using translucent resins such bulk fill resins, it is necessary to take into consideration the adhesive system used give the colorimetric change that appears to occur in the restoration.

Referências bibliográficas:

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