

Clinical evaluation of Esthet X

Trevor Burke and Russell Crisp report on the findings by the PREP panel.



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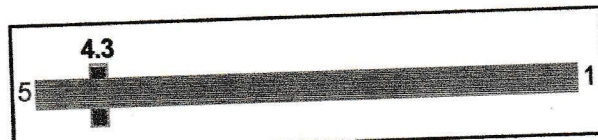
Easy handling of dental materials is a factor which may facilitate the placement of good quality, long-lasting restorations. This is of special relevance in the busy conditions often prevailing in general dental practice. With this in mind, the PREP (Product Research and Evaluation by Practitioners) Panel was established in the UK in 1993. This group, which now numbers 25 general dental practitioners, has carried out over 30 evaluations of the handling of new dental materials and techniques and a number of clinical evaluations.

Recent years have seen an increasing patient interest in dental aesthetics and some manufacturers have, accordingly, produced resin composite materials with a wider variety of shades and opacities than previously-available materials. This paper reports the evaluation of the handling of a resin composite restorative material, Esthet X from Dentsply, which is supplied in 19 regular body shades, seven opaque dentine shades and five translucent enamel shades to allow the layer-by-layer build up of restorations where indicated. The back of the shade guide provides a 'recipe' which advises the clinician on the shades which build together to produce the required shade and translucency.

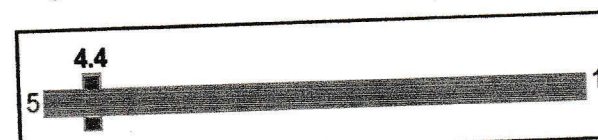
All evaluators used composite materials in anterior teeth and 88 per cent said they normally placed composite restorations in posterior teeth. Of these composite restorations, on average, 39 per cent were occlusal, 46 per cent were Class II and the remaining 15 per cent were MOD restorations.

When asked to give details of the finishing/ polishing system used for anterior composites, the evaluators indicated that commonly, fine diamond or composite finishing burs were used, followed by abrasive discs and a final polish using a system such as Enhance (Dentsply) or a diamond paste. Typically, a similar regime was followed to finish posterior composite restorations.

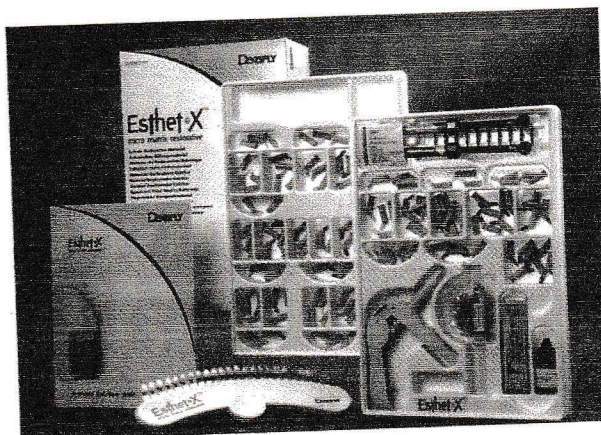
When the evaluators were asked to rate the aesthetic



● Figure 1.



● Figure 2.



The back of the shade guide provides a 'recipe' which advises the clinician on the shades which build together to produce the required shade and translucency.

quality of anterior restorations placed using their current composite material the result can be seen in fig 1. Fifty per cent of the evaluators said the composite which they used before the evaluation for anterior restorations had an insufficient number of shades. The mean number of shades provided was 11 with a range of 6 to 21.

Evaluators rated the presentation of the Esthet X kit as in fig 2 in terms of the completeness of the system.

Eighty-eight per cent of the evaluators said the compules and gun of the Esthet X system worked satisfactorily.

The total number of restoration placed during the evaluation was 433.

The evaluators were asked to give their, and their dental nurse's, assessment of the dispensing and placement of Esthet X for anterior and posterior restorations. The results can be seen in figs 3 and 4.

Twenty-five per cent of the evaluators said they had experienced slight difficulty with material sticking to instruments and this was overcome by dipping instrument in the bond liquid.

The evaluators were asked if material flowed satisfactorily (fig 5). Sixty-three per cent of the

Evaluators said the viscosity of the material was satisfactory. The remainder stated that it was too viscous. Eighty-eight per cent stated that the material had sufficient working time in clinical use, with the remaining evaluator commenting 'seems to set too quickly with both dental and ambient light'.

Eighty-eight per cent stated the restorations were easily finished using Enhance discs and Prisma gloss (Dentsply). All stated that the restoration margins were generally visually satisfactory.

The evaluators were asked to assess the translucency/opacity of Esthet X and their results can be seen in figs 6 and 7.

All thought the number of shades provided was adequate although one third thought the number was excessive.

All the evaluators said the large range of shades in the kit enabled them to place more aesthetic restorations.

Conclusion

The Esthet X system has been subjected to an extensive evaluation in clinical practice by members of the PREP panel in which 433 restorations were placed. Based on this the following conclusions may be made:

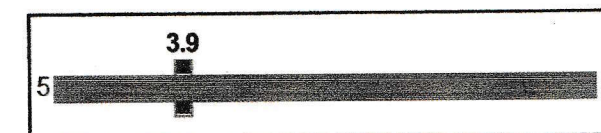
Presentation: Though the kit scored well in terms of the completeness of the components (4.4 on a visual analogue scale where 5 = excellent and 1 = poor), it was considered too large. This compromised its ability to be positioned easily on the working area (rated 2.5 on a visual analogue scale where 5 = excellent and 1 = poor). The illustrated technique guide and the laminated instruction card were given maximum ratings of 5 (on the visual analogue scale where 5 = excellent and 1 = poor), with no suggestions for improvement.

Delivery system: Eighty eight per cent of the evaluators stated that the compules and syringes worked satisfactorily, though two commented that the gun needed considerable pressure.

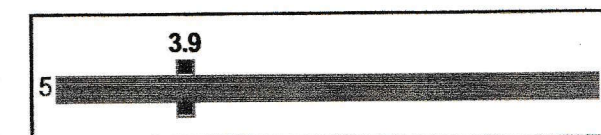
Aesthetic quality: Esthet X achieved a near perfect rating of 4.9 (on a visual analogue scale where 5 = excellent and 1 = poor) for overall aesthetic quality of the restorations. This compared with 4.2 for the material used prior to this evaluation. The rating for translucency/opacity of 3 (on a visual analogue scale where 5 = too translucent and 1 = too opaque) assessed for Esthet X is the ideal median score.

That the material was well received is indicated by the 100 per cent of evaluators who stated they would purchase the Esthet X system for £199 and that all the evaluators would recommend the system to colleagues.

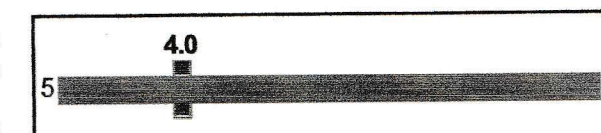
A number of evaluators (38 per cent) commented on the learning curve required to get the best results and one evaluator suggested that clinicians should be offered the chance by the manufacturer to go on a course to get the best out of the material.



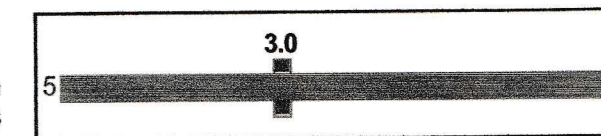
● Figure 3.



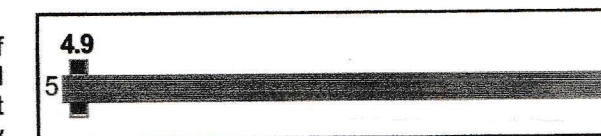
● Figure 4.



● Figure 5.



● Figure 6.



● Figure 7.

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Manufacturer's comments
We welcome the positive findings from the survey. Since the PREP Panel completed their evaluation of Esthet X many of the suggestions made by the panel have been acted on.

The launch of new Esthet X Improved has resulted in the following improvements being made:

- Up to 90 per cent longer working time on certain shades.
- Increased chroma on certain shades has resulted in shades that match the shade guide more closely.
- New manufacturing equipment has completely removed the possibility of dry composite or bubbles being found in the compules.

Courses on how to achieve best results with Esthet X have been organised by the Dentsply professional support managers.

To attend one contact Dentsply on 01932 853 422. ■