



## Colorimeter is used in a dental college laboratory

Colorimeter is active in evaluation for improving stain resistance of dental restorative materials

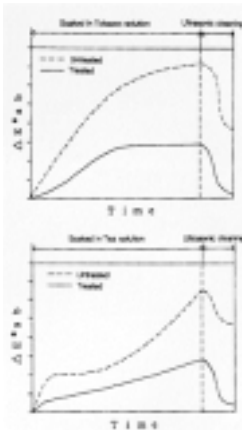
### Background

Resins used as restorative materials for dental treatment to fill drilled teeth or cap ground teeth have made remarkable progress in recent years. However, the problem that the surface of the resin is easily stained by tobacco or food has still not been solved. Because of this, this college laboratory conducts research on improving the resin surface condition. To improve the resistance of the resin to pigmentary deposits, attention is being paid to surface treatment agents which improve the water repellency and the possibility of using various surface treatment agents is investigated. For this investigation, the color of the sample requires quantification with a colorimeter which can measure the samples (10mm) accurately and provide numerical data. Surface treatment agents are also receiving attention for use on industrial parts.

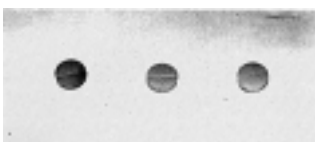


Measurement by Colorimeter

### Outline of the measurement process



A sample treated with a surface treatment agent and an untreated sample are both soaked in tobacco solution. Then the color differences from a sample soaked in distilled water are measured using Colorimeter. The measuring area is set to 1.8mm for the measurements. Measurements are taken at five points on each sample. The data of the five points are averaged by the Colorimeter because there are some differences between measurement points. The same experiment as above is also performed with a tea solution. It was confirmed that the resistance of the resin surface to pigmentary deposits is improved by the surface treatment. In addition, based on measurements of samples cleaned ultrasonically after the above experiments, it was found that pigmentary deposits are more easily removed from treated samples than from untreated ones.



Measured samples

### Results

- Small specimens can be measured in a short time by Colorimeter.
- Colorimeter is compact and lightweight. So it can be moved away from the laboratory when it is not in use. This makes possible more effective use of laboratory space.