

*DETEKSI PERUBAHAN WARNA RESIN KOMPOSIT HIBRID  
SETELAH DIRENDAM KLOORHEKSIDIN GLUKONAT 0,2 %  
MENGUNAKAN SENSOR FOTODIODA*

(DETECTION OF HYBRID COMPOSITE RESIN COLOR CHANGE  
AFTER IMMERSION CHLORHEXIDINE GLUCONATE 0,2%  
USING PHOTODIODE SENSOR )

**ABSTRACT**

**Background.** Teeth restoration material requirement is not changed color in a long time and that is composite resin, especially for the anterior or posterior use, hybrid composite. Chlorhexidine gluconate 0,2% as mouthwash can cause discoloration of teeth and teeth restoration material. **Purpose.** The aim of this study was to know the beginning time of color changes detection by photodiode sensor from hybrid composite resin after immersed in chlorhexidine gluconate 0,2% at 2 minute of interval time. **Method.** This research was laboratoris experimental descriptive with pre and post test control group design. Sample immersed at artificial saliva (pre test), measured by photodiode sensor and then the same sample was immersed in chlorhexidine gluconate 0,2% at 2 minute of interval time, measured by photodiode sensor until get the result of the beginning time of color changes and analyzed by Anova Repeated Measure. **Result.** There was a significant difference ( $p < 0,05$ ) of composite resin color change after immersed in chlorhexidine gluconate 0,2% for 34 minute, 44 until 78 minute. **Conclusion.** The colour changes detected by photodiode sensor from hybrid composite after immersed in chlorhexidine gluconate 0,2% beginning at 34 minute.

**Key words:** hybrid composite resin, chlorhexidine gluconate 0,2%, photodiode sensor, color change