

INTISARI

Taslim. I., 2017. Perbedaan hasil kadar kolesterol total antara metode *Electrode-based Biosensor* menggunakan sampel *wholeblood* dan serum dengan metode *Enzymatic End Point*. D-IV Analisis Kesehatan, Fakultas Ilmu Kesehatan, Universitas Setia Budi Surakarta.

Penyakit jantung merupakan salah satu penyakit tidak menular dan merupakan salah satu penyebab terjadinya kematian di berbagai negara maju dan juga negara berkembang akibat tingginya kadar kolesterol dalam darah. Beberapa metode pemeriksaan yang dapat dilakukan untuk mengetahui kadar kolesterol total dalam darah, adalah *Iron-Salt-Acid*, *Liebermann-Burchard*, dan *Enzymatic End Point* dan *Electrode-based biosensor*. *Enzymatic end point* menjadi *gold standart* dalam menegakkan diagnosa sedangkan *electrode-based biosensor* menjadi metode yang paling fleksibel dan efisien bagi masyarakat. Penelitian ini dilakukan untuk mengetahui perbedaan hasil kadar kolesterol total antara metode *electrode-based biosensor* menggunakan sampel *wholeblood* dan serum dengan metode *enzymatic end point*.

Metode penelitian bersifat observasi analitik dengan pendekatan *cross sectional*. Penelitian ini menggunakan 30 sampel yang diambil secara random terhadap pasien RSUD Karanganyar, dilakukan pengukuran kadar kolesterol total dengan metode *electrode-based biosensor* menggunakan sampel *wholeblood* dan serum dengan metode *enzymatic end point*. Analisis data menggunakan uji *paired sample t test*.

Berdasarkan hasil uji *paired sample t test* diperoleh nilai signifikan $0,000 < 0,05$. Simpulan penelitian terdapat perbedaan yang bermakna antara hasil kadar kolesterol total dengan metode *electrode-based biosensor* menggunakan sampel *wholeblood* dan serum dengan metode *enzymatic end point*.

Kata kunci: *Electrode-based Biosensor*, *Enzymatic end point*, *Kolesterol*

ABSTRACT

Taslim. I., 2017. The Differences of Total Cholesterol Levels between Electode-based Biosensor Method using Sample of Wholeblood and Serum with Enzymatic End Point Method. Health Analyst D-IV. Faculty of Healt Science. Universitas Setia Budi of Surakarta.

Cardiovascular disease is one of non-communicable disease, it causes a death in several developed countries and developing countries, it occurs because a high cholesterol level in blood. There are several examination methods can be used to determine the cholesterol level in blood, such as Iron-Salt-Acid, Libermann-Burchard, Enzymatic End Point and Electrode-based biosensor. Enzymatic End Point becomes a gold standart in established diagnosis, whereas electrode-based biosensor is the most flexible and efficient method for society. This research was conducted to determine the differences of total cholestrol levels between Electrode-based biosensor method using sample of wholeblood and serum with Enzymatic End Point method.

This research method was analytic observation with cross sectional approach. This research used 30 samples from patients in Karanganyar Regional Public Hospital taken randomly, measured cholesterol level by Electrode-based biosensor using wholeblood and serum sample and Enzymatic End Point method. Paired sample t test was used in data analysis.

The paired sample t test result indicated the significant value $0,000 < 0,05$. There were sygnificantl differences between the result of total cholesterol level exemained by electrode-based biosensor method using wholeblood and serum sample with enzymatic end point method.

Keywords: *Electrode-based Biosensor, Enzymatic end point, Cholesterol*