

ABSTRAK

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AKURASI DAN PRESISI ALAT POCT CARDIO CHECK PROFIL LIPID
TERHADAP *AUTOMATIC CHEMISTRY ANALYZER*

xvi + 58 Halaman + 19 Tabel + 13 Lampiran

Pemantapan mutu laboratorium klinik perlu dilakukan untuk meningkatkan kualitas pelayanan kesehatan masyarakat. Salah satu pemeriksaan laboratorium yang penting adalah pengujian profil lipid, karena berperan dalam menilai risiko penyakit kardiovaskular. Penelitian ini bertujuan untuk mengetahui tingkat akurasi dan presisi alat *Point of Care Testing* (POCT) Cardio Check dalam mengukur dibandingkan dengan *Automatic Chemistry Analyzer* sebagai alat standar.

Penelitian ini merupakan penelitian komparatif analitik dengan desain *cross sectional*. Sampel sebanyak 30 responden diambil secara acak dari populasi pasien di RSUD Caruban Madiun yang menjalani pemeriksaan kadar kolesterol total, trigliserida, HDL, dan LDL, dengan persetujuan *informed consent*. Analisis data dilakukan berdasarkan nilai akurasi (%bias dan %recovery) dan presisi (nilai koefisien variasi/CV).

Hasil penelitian menunjukkan Akurasi Kolesterol total dan HDL termasuk dalam kategori kurang akurat dengan % bias masing-masing -16,11% dan -21,42%, serta %recovery 83,89% dan 78,58%. Sebaliknya, trigliserida dan LDL termasuk kategori akurat dengan % bias -3,23% dan -12,63%, serta % recovery 96,77% dan 87,37%. Untuk presisi semua parameter profil lipid menunjukkan nilai CV <5%, yaitu kolesterol total (1,83%), trigliserida (1,13%), HDL (1,42%), dan LDL (4,54%), sehingga dapat disimpulkan bahwa alat POCT Cardio Check memiliki presisi yang baik. Uji perbandingan menunjukkan terdapat perbedaan signifikan hasil antara POCT *Cardio Check* dan *Automatic Chemistry Analyzer* untuk kolesterol total, HDL, dan LDL, namun tidak untuk trigliserida. Kesimpulannya, POCT *Cardio Check* menunjukkan presisi yang baik, namun akurasinya bervariasi tergantung parameter, dengan hanya trigliserida dan LDL yang termasuk kategori akurat.

Kata kunci: Akurasi, Presisi, POCT *Cardio Check*, *Automatic Chemistry Analyzer*
Daftar bacaan: 15 buku (2012 – 2024)

ABSTRACT

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ACCURACY AND PRECISION OF POCT CARDIO CHECK LIPID PROFILE TOOL COMPARED TO AUTOMATIC CHEMISTRY ANALYZER.

xvi + 58 Pages + 19 Tables + 13 Appendices

Strengthening the quality of clinical laboratories needs to be done to improve the quality of public health services. One important laboratory test is lipid profile testing, as it plays a role in assessing the risk of cardiovascular disease. This study aims to determine the accuracy and precision level of the Point of Care Testing (POCT) Cardio Check device in measuring compared to the Automatic Chemistry Analyzer as a standard tool.

This research is a comparative analytical study with a cross-sectional design. A sample of 30 respondents was randomly taken from the patient population at RSUD Caruban Madiun who underwent total cholesterol, triglycerides, HDL, and LDL examinations, with informed consent. Data analysis was conducted based on accuracy values (% bias and % recovery) and precision (coefficient of variation/CV values).

The study results show that the accuracy of total cholesterol and HDL falls into the less accurate category with bias percentages of -16.11% and -21.42%, respectively, as well as recovery percentages of 83.89% and 78.58%. Conversely, triglycerides and LDL are categorized as accurate with bias percentages of -3.23% and -12.63%, and recovery percentages of 96.77% and 87.37%. For the precision of all lipid profile parameters, the CV values are <5%, namely total cholesterol (1.83%), triglycerides (1.13%), HDL (1.42%), and LDL (4.54%), concluding that the POCT Cardio Check device has good precision. The comparison test shows a significant difference in results between the POCT Cardio Check and the Automatic Chemistry Analyzer for total cholesterol, HDL, and LDL, but not for triglycerides. In conclusion, the POCT Cardio Check shows good precision, but its accuracy varies depending on the parameter, with only triglycerides and LDL being categorized as accurate.

Keywords: Accuracy, Precision, POCT Cardio Check, Automatic Chemistry Analyzer

References: 15 books (2012 – 2024)