

ABSTRAK

**EVALUASI PROSES *MAINTENANCE*, *CONTROLLING* DAN
TROUBLESHOOTING PADA *AUTOMATED CLINICAL CHEMISTRY*
ANALYZER COBAS C 311 DI LABORATORIUM RUMAH SAKIT
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Cobas c 311 merupakan instrumen *autoanalyzer* yang digunakan untuk pemeriksaan kimia klinik rutin di Laboratorium Rumah Sakit Universitas Airlangga. Prinsip pemeriksaan Cobas c 311 yaitu *multiple wavelenght spektrofotometer* dan mampu melakukan pemeriksaan hingga 300 sampel/jam. Parameter pemeriksaan Cobas c 311 yang digunakan di Laboratorium Rumah Sakit Universitas Airlangga antara lain total protein, albumin, glukosa, HDL, LDL, trigliserida, SGOT, SGPT, ALP, kolesterol total, bilirubin total, bilirubin *direct*, kreatinin, kalsium, fosfor, urea/BUN, magnesium, gamma GT, dan asam urat. Sebagai tenaga laboratorium perlu menunjang kinerja alat Cobas c 311 dengan mengetahui proses *quality control*, *maintenance*, dan *troubleshooting* untuk mendapatkan hasil yang akurat.

Metode pengumpulan data yang digunakan observasi deskriptif yaitu menganalisa data primer yang sudah ada dengan metode wawancara, observasi, dan studi pustaka *autoanalyzer* Cobas c 311 di Laboratorium Rumah Sakit Universitas Airlangga. Data yang diambil yaitu evaluasi proses *Controlling*, *maintenance*, dan laporan *troubleshooting*.

Maintenance harian dan mingguan Cobas c 311 bulan Januari – April 2019 di Laboratorium Rumah Sakit Universitas Airlangga telah dijalankan dengan baik. *Maintenance* bulanan Cobas c 311 di Laboratorium Rumah Sakit Universitas Airlangga hanya melakukan pembersihan pada bagian permukaan instrumen. Hasil *quality control* Cobas c 311 selama bulan Januari – April 2019 di Laboratorium Rumah Sakit Universitas Airlangga tidak melebihi batas rentang nilai kontrol sehingga hasil kontrol dapat diterima. Cobas c 311 hampir tidak pernah mengalami kerusakan selama setahun terakhir. *Alarm troubleshooting* hanya sering muncul pada perintah “*Outside of the upper expected value*” atau nilai hasil pemeriksaan diluar batas linearitas dan perlu dilakukan pengenceran.

Keyword : Cobas c 311, *Quality control*, *Maintenance*, dan *Troubleshooting*.

ABSTRACT

EVALUATION PROCESS OF MAINTENANCE, CONTROLLING, AND TROUBLESHOOTING IN AUTOMATED CLINICAL CHEMISTRY ANALYZER COBAS C 311 IN HOSPITAL LABORATORY AIRLANGGA UNIVERSITY

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Cobas c 311 is automated clinical chemistry analyzer in Airlangga University Hospital Laboratory. Principle of Cobas c 311 uses multiple wavelength spektrofotometry and can perform 300 sampel/hour. Cobas c 311 parameters that used in Airlangga University Hospital Laboratory include total protein, albumin, glucose, HDL, LDL, trigliserid, SGOT, SGPT, ALP, cholesterol total, Bilirubin total, bilirubin direct, creatinin, calsium, fosfor, urea/BUN, Magnesium, Gamma GT, dan Uric Acid. As Technical laboratory need to support Cobas c 311 performance by knowing how to know process of quality control, maintenance, and troubleshooting to get acurrate result.

Data collection methode uses descriptive observation that is analyzing primer data which already exist and interview method, observation and literature study about autoanalyzer Cobas c 311 in Airlangga University Hospital Laboratory. The data is takken by researcher include evaluate process on controlling, maintenance, and report of troubleshooting.

Daily and weekly maintenance of Cobas c 311 on January – April 2019 in Airlangga University Hospital Laboratoryhave been doing well. Monthly maintenance of Cobas c 311 in Airlangga University Hospital Laboratory only does cleaning on the surface of instrumen. The value of the quality control Cobas c 311 on January – April 2019 in Airlangga University Hospital Laboratory does not exceed of the range control value so that the results of the control are acceptable. Cobas c 311 almost never since the past year. Alarm troubleshooting only often happens on “Outside of the upper expected value” or when patient result is outside the linearity limit and required to dilution.

Keyword : Cobas c 311, Quality control, Maintenance, and Troubleshooting.