

Little b Makes Big Impact

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INTRODUCTION

The Roche Cobas b 101 (referred to as little b in title) is a compact, portable point of care testing analyser. Using fingerprick samples it rapidly measures HbA1c and a full lipid panel comprising of; total cholesterol (TC), triglycerides (TG), high density lipoprotein cholesterol (HDL) and a calculated low density lipoprotein cholesterol (LDL). The study objective was to evaluate capillary results on the Roche Cobas b 101 system against venous results on the current platforms; Biorad Variant (HbA1c) and Abbott C16000 (lipids) used at Canterbury Health Laboratories (CHL).

METHOD AND MATERIALS

A fingerprick capillary sample along with a venous sample was taken from 20 laboratory staff for HbA1c and lipid testing. To provide a wider range of results, 20 patients from the diabetes clinic who were undergoing routine testing were approached to provide a capillary and venous sample for the study. Due to low patient attendance at the diabetic clinic appointments only 13 patients were bled for the study.

Capillary samples were tested on the Cobas b 101 system with venous samples tested on the current platforms; Biorad Variant for HbA1c and the Abbott C16000 for lipids. All samples had a haematocrit (Hct) measured on the Sysmex XE2100.

Figure 1. HbA1C

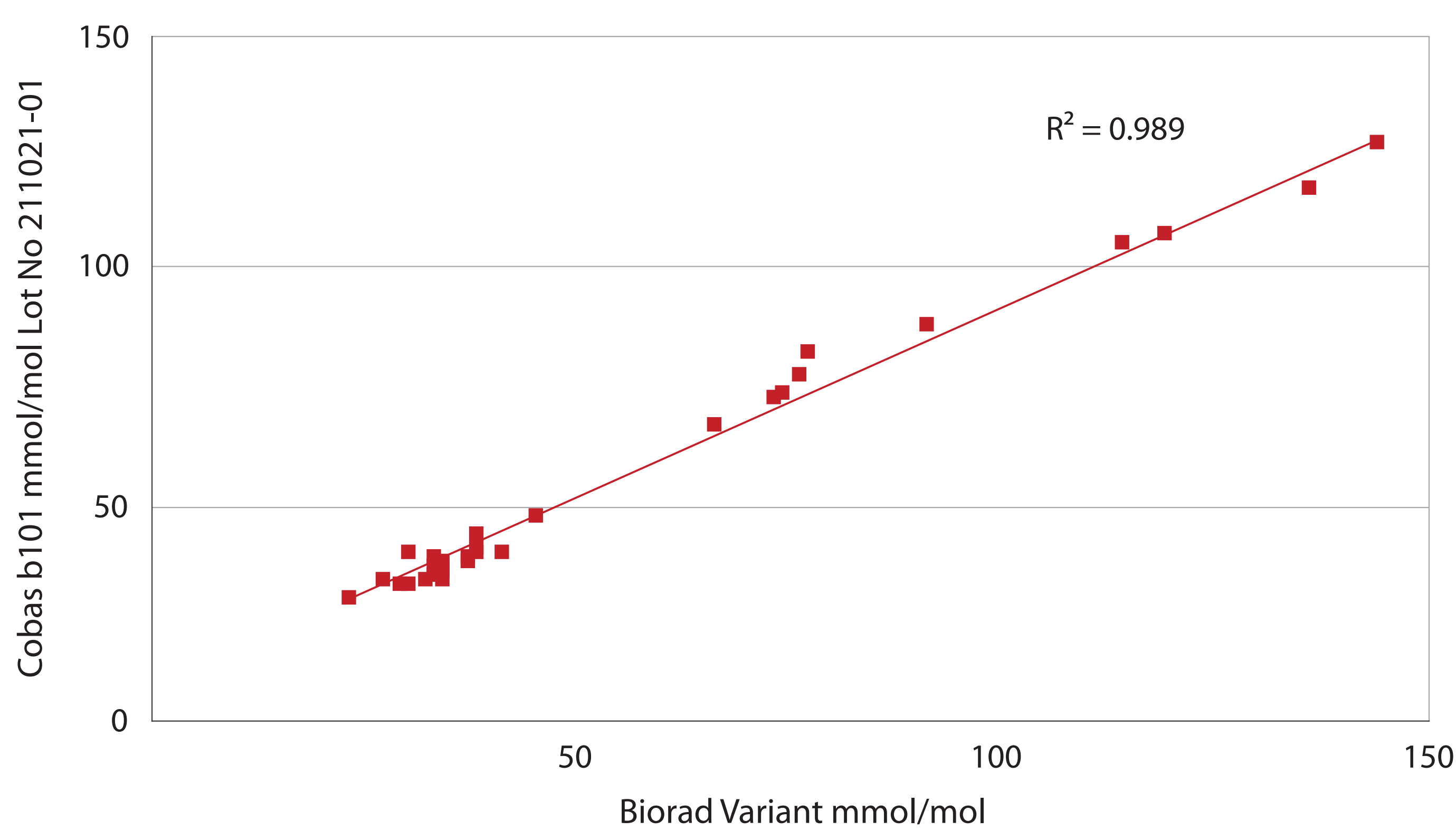


Figure 2. Total Cholesterol

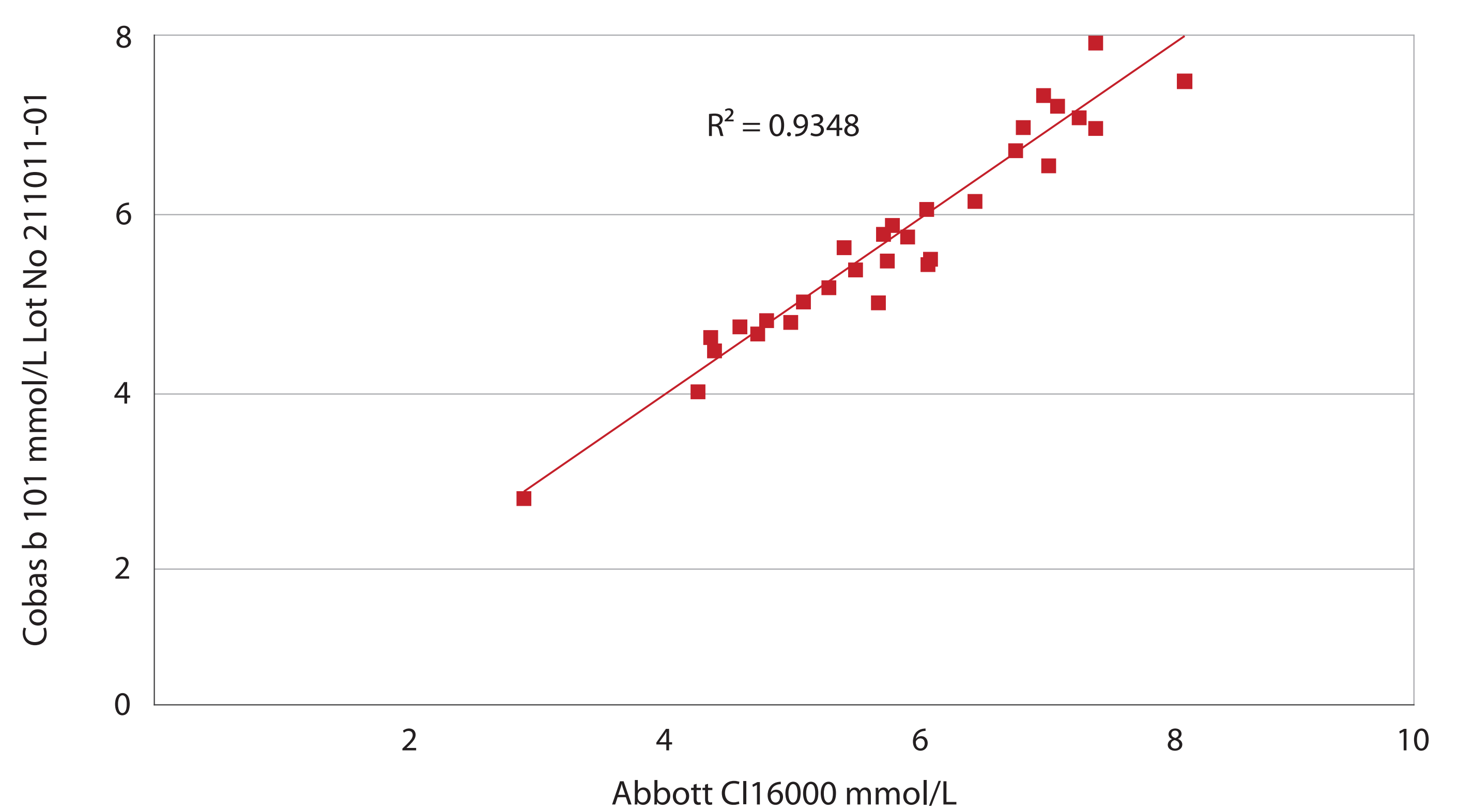


Figure 3. Triglycerides

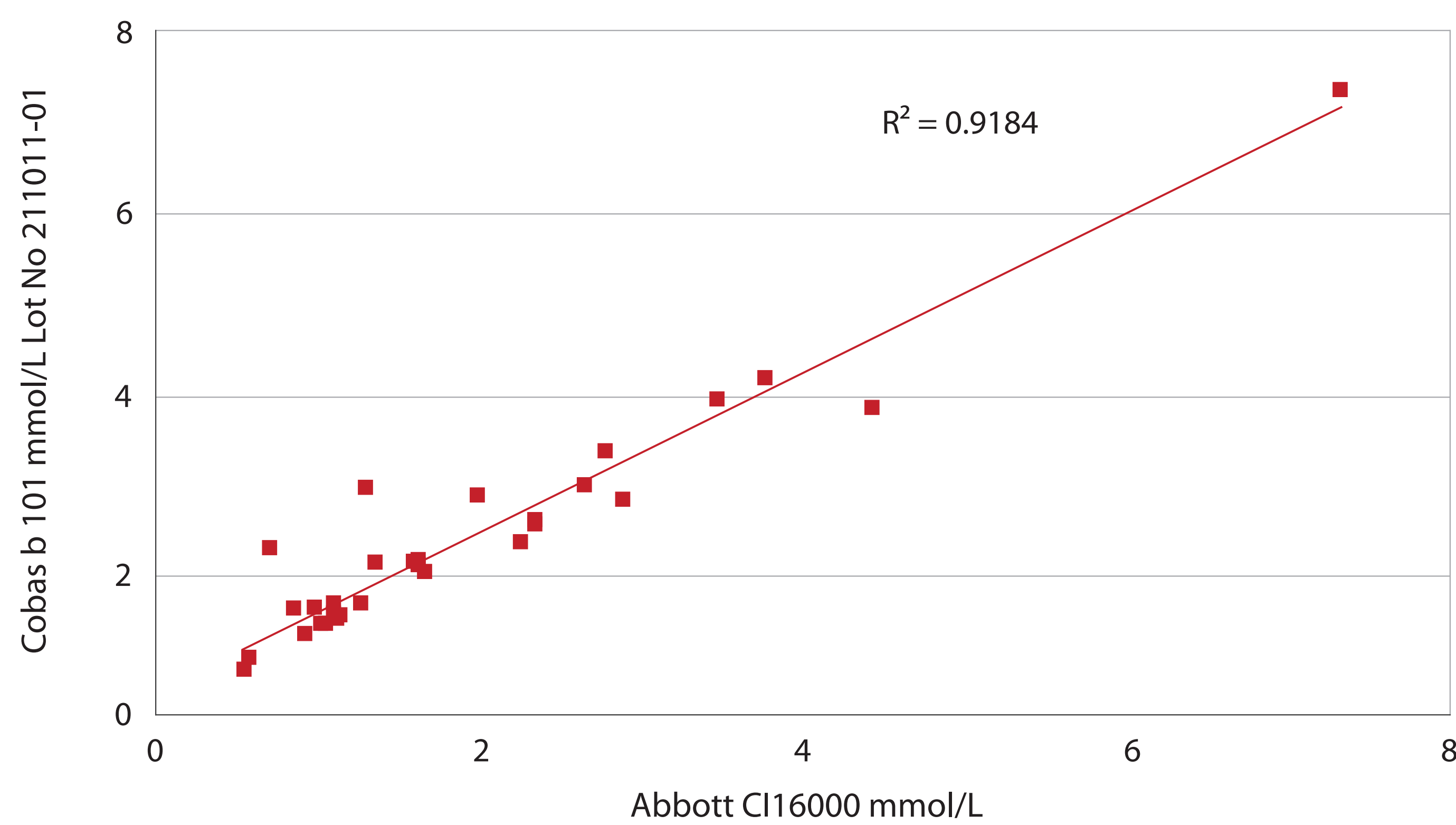
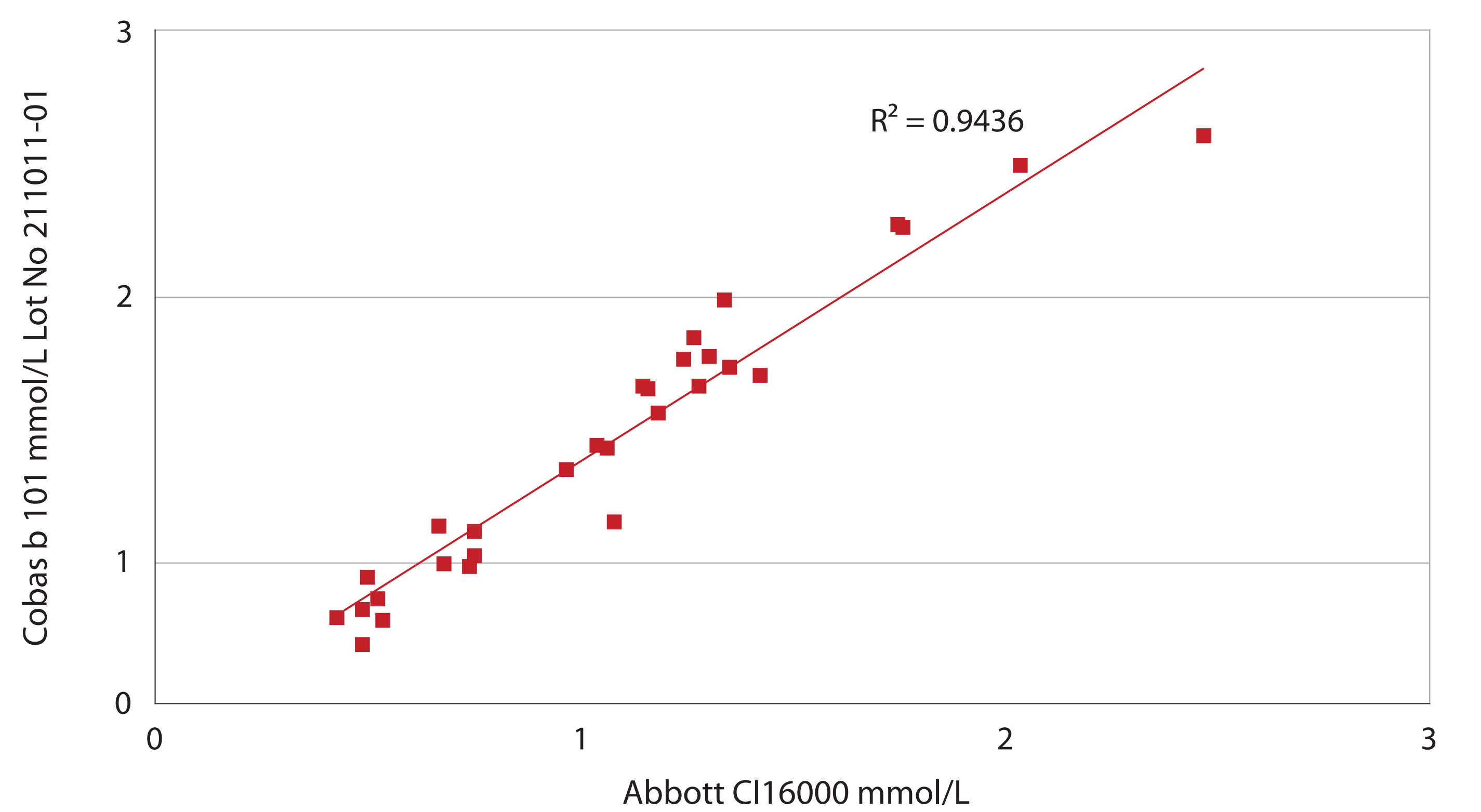


Figure 4. HDL



RESULTS

Measured analytes only, are discussed and graphed. HbA1C results have a strong correlation with the reference laboratory platform (Figure 1). All three measured lipid values showed good correlation with the reference laboratory platform, ranging from 0.92 – 0.94 (Figure 2 – 4).

Data excluded from the evaluation were due to one operator error (slow lipid disc fill) and two Roche Cobas b 101 Triglycerides results of G7.35, HDL on these samples not measured.

CONCLUSION

Data from the capillary evaluation shows that the Roche Cobas b 101 analyser provides comparable results with the reference laboratory platforms Biorad Variant (HbA1c) and Abbott C16000 (lipids).

The study also highlighted problems with patient attendance at diabetic appointments, emphasising how the Roche Cobas b 101, in a point of care setting, could reach a greater proportion of the population making a big impact on health outcomes.