INTRODUCTION

Plasmid mediated AmpC type β-lactamases are commonly isolated from cephalosporin-resistant Enterobacteriaceae and can cause hospital outbreaks. The aim of this study was to test a fast detection assay (eazyplex® SuperBug AmpC) for detection of the most common plasmid mediated AmpC (pAmpC) β-lactamase genes in Enterobacteriaceae (ACC, CMY-II group, DHA and MOX).

MATERIALS AND METHODS

The eazyplex® SuperBug AmpC assay (Amplex Diagnostics) is based on loop-mediated isothermal amplification (LAMP) and real-time detection of four different target genes coding for AmpC type β-lactamases (Table 1). A collection of 35 Enterobacteriaceae isolates previously confirmed by molecular methods (in-house PCR and Check-Points microarray kit, Check-MDR 103XL®) were used in the evaluation (Table 2). Of the 35 isolates tested, 9 were reference strains from Culture Collection, University of Göteborg (CCUG), Sweden (7 pAmpC positive and 2 negative), 11 were clinical isolates from our culture collection and 14 were consecutive clinical isolates. The assay was performed according to the manufacturer’s instructions on Genie II (Amplex Diagnostics).

RESULTS

Thus, a sensitivity of 100% for the target genes ACC, CMY-II and DHA were obtained. No false-positive results were observed resulting in a specificity of 100% for ACC, CMY-II and DHA.

REFERENCES