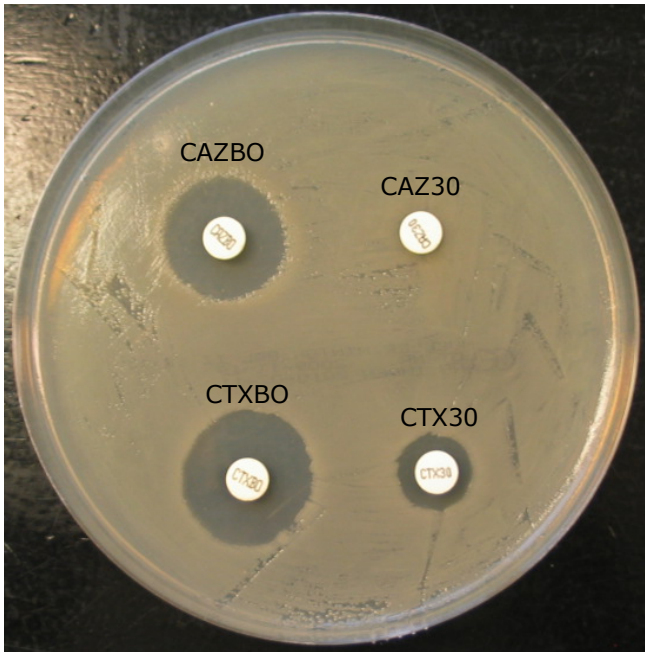
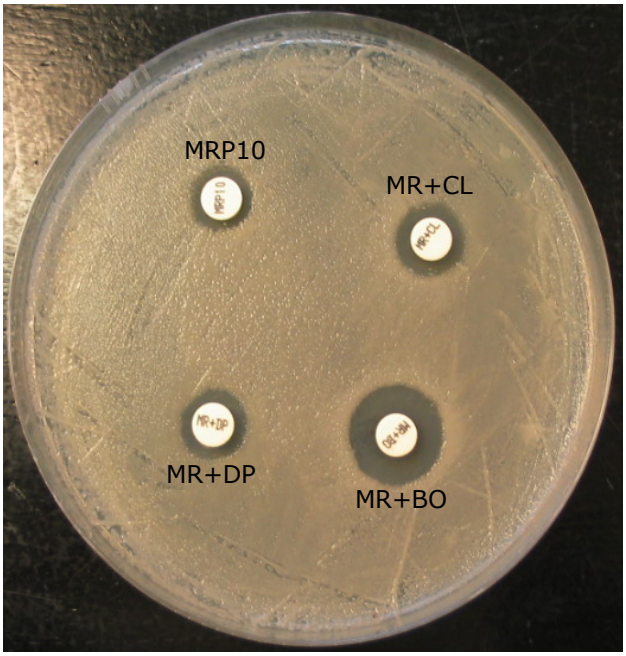
Detection of resistance mechanisms



E. coli AmpC positive



K. pneumoniae KPC positive

using Neo-Sensitabs™ and Diatabs™

2024

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PREFACE

Detection of resistance mechanisms 2024

Laboratories must be able to identify resistant microorganisms, trends in resistance, emerging resistance patterns among clinically relevant bacteria. In order to recognize resistance phenotypes, a suitable number of antimicrobial agents must be used in susceptibility testing, as well as specific agents (indicator drugs) implying mechanisms conferring resistances that may be less obvious in current tests.

With this approach, it would be possible for the microbiologist to:

a) detect mechanisms of resistance, including low level expression
b) modify clinical classifications that are inconsistent with the inferred resistance mechanism
c) inference of susceptibility results for antimicrobials that are not included in the antibiogram.

The Users Guide for Detection of Resistance Mechanisms includes a series of tests, particularly useful for the detection of beta-lactamases: ESBL, AmpC, Carbapenemases as well as many other enzymes such as 16S rRNA methylases, Plasmid mediated quinolone resistance, and has been written by J.B.Casals on behalf of Rosco Diagnostica.

Besides, the booklet contains information on the technique used to detect HVISA, VISA strains, using Vancomycin and Teicoplanin Neo-sensitabs by the prediffusion method. Technique for detecting Daptomycin non-susceptible staphylococci and enterococci using Daptomycin Neo-Sensitabs and the prediffusion method.

As well as the detection of colistin resistant *P. aeruginosa, A. baumannii* and *Enterobacteriaceae* using Colistin 10 ug Neo-Sensitabs by the prediffusion method.

Tests for detecting Hypermutable strains and Heteroresistant strains, as well as Efflux pump inhibitors are described too.

Finally, a chapter on resistance mechanisms and automated methods, could be interesting lecture for laboratories relying only on automated methods. It is obvious, that these laboratories will have good help in using the tests mentioned in this booklet to complement their results.

The User's Guide is available at our website www.rosco-diagnostica.com and updated information will continuously be included.

ROSCO DIAGNOSTICA is welcoming any feedback and questions from users directly (info@rosco-diagnostica.com) or through our representatives.