

DIAGNOSTIC LABORATORY 2

Patient: Alison
 DOB: 01/02/1995
 SEX: F

****FINAL REPORT****

LATEX AGGLUTINATION TEST: positive

DISC DIFFUSION TESTS:

<i>Antibiotic</i>	<i>Zone of inhibition diameter (mm)</i>	<i>Interpretation</i>
Methicillin	5	Resistant
Erythromycin	9	Resistant
Cephalexin	2	Resistant
Ciprofloxacin	10	Resistant
Gentamicin	4	Resistant
Vancomycin	22	Susceptible

DESCRIPTION OF TESTS

LATEX AGGLUTINATION TEST: The latex agglutination test is a rapid and specific test for methicillin resistant *Staphylococcus aureus* (MRSA). Rapid tests for MRSA rely on microscopic balls of latex coated with antibodies that specifically bind to the PB2A protein of MRSA. When mixed with a suspension containing MRSA, binding of the bacteria (via PB2A interaction with the antibody) cause the latex molecules to stick together and fall out of solution (similar to a blood typing test). This is called agglutination and can happen within our bodies as part of the immune response to infection.

DISC DIFFUSION TEST: The disc diffusion test is used to assess the antibiotic sensitivity of bacteria. Discs of paper infused with antibiotics are placed on an agar plate streaked with bacteria. Based on the size of the zone around the disc where bacterial growth is inhibited, one can determine whether a bacterium is susceptible or resistant to a particular antibiotic.

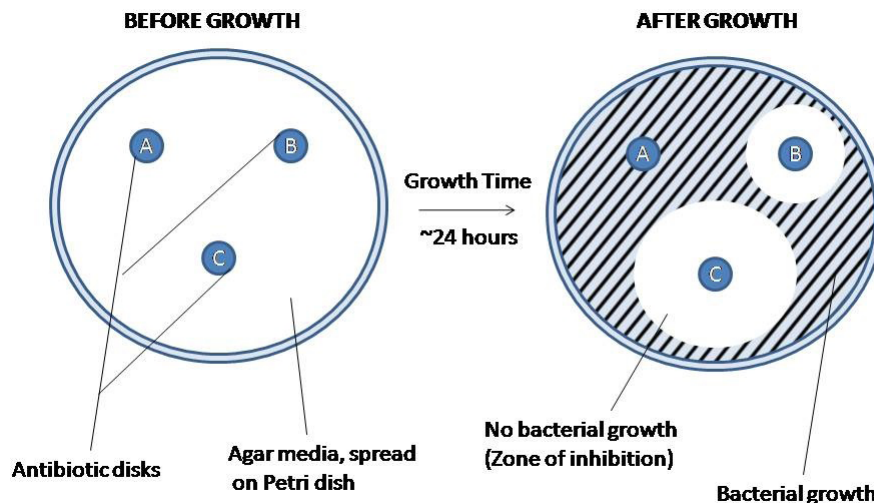


Figure 6. Disc diffusion method of antibiotic sensitivity testing. Credit: Sommer36. CC BY-SA 4.0, <https://commons.wikimedia.org/wiki/File:Agar_Diffusion_Method_1.jpg>.