DNase Test

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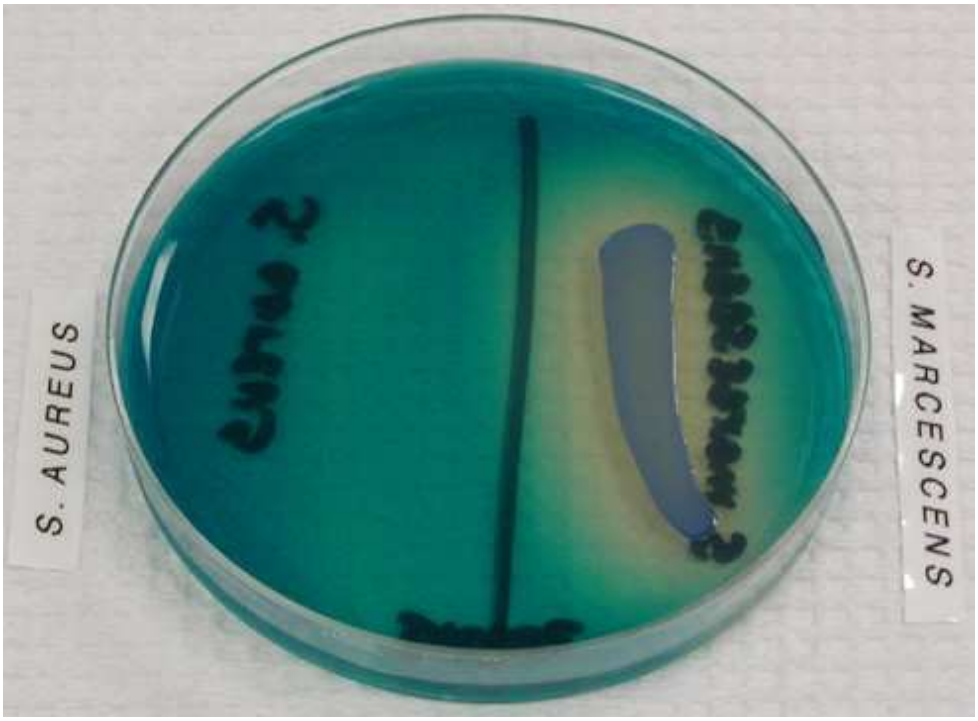
DNase agar is a differential medium that tests the ability of an organism to produce an exoenzyme, called deoxyribonuclease or DNase, that hydrolyzes DNA. DNase agar contains nutrients for the bacteria, DNA, and methyl green as an indicator. Methyl green is a cation which binds to the negatively-charged DNA.

Deoxyribonuclease allows the organisms that produce it to break down DNA into smaller fragments.

When the DNA is broken down, it no longer binds to the methyl green, and a clear halo will appear around the areas where the DNase-producing organism has grown.



The *Staphylococcus aureus* on the left is negative for DNase production; the *Serratia marcescens* on the right is positive for DNase production as evidenced by the area of clearing around the growth.

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