BIOL 2420

Microbiology for the Health Sciences

Biochemical Test Chart

(You will not fill in every blank in this chart.)

		Alcaligenes faecalis	Bacillus megaterium	Bacillus subtilis	Enterobacter aerogenes	Enterobacter cloacae	Enterococcus faecalis	Escherichia coli	Klebsiella pneumoniae	Micrococcus luteus	Micrococcus roseus	Proteus mirabilis	Proteus vulgaris	Pseudomonas aeruginosa	Salmonella typhimurium	Serratia marcescens	Staphylococcus aureus	Staphylococcus epidermidis	Streptococcus agalactiae	Streptococcus pyogenes
Colonial Morphology (use standard abbreviations or devise your own legend)	surface, consistency, soluble pigment, optical, size, shape, margin, elevation, color, etc.																			
Cellular Morphology	rods, cocci, pairs, chains, tetrads, clumps, size, etc.																			
Motility	+ = motile - = nonmotile																			
Gram Stain	+ = purple to blue stain - = red to pink stain																			
Acid-Fast Stain	+ = acid fast (red) - = non-acid fast (blue)																			
Capsule Stain	+ = capsules (halo around cells) - = no capsules																			
Endospore Stain	+ = endospores (green) - = no endospores (red)																			
Glucose Fermentation	+ = yellow (Check for gas) - = red																			
Lactose Fermentation	+ = yellow (Check for gas) - = red																			
Sucrose Fermentation	+ = yellow (Check for gas) - = red																			
Casease	+ = clearing in agar - = no clearing in agar																			
Gelatin Hydrolysis	+ = liquid - = solid																			
Lipase (Tributyrin)	+ = clearing in agar - = no clearing in agar																			
Starch Hydrolysis	+ = no color change in iodine - = iodine turns blue/black																			
Indole	+ = red lake - = no color change																			
Methyl Red	+ = red - = yellow to orange																			
Voges Proskauer	+ = intense rose/red color - = yellow																			
Citrate	+ = blue - = green																			

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Hydrogen Sulfide	+ = black precipitate - = no black precipitate																			
Nitrate	+ = red or brown on 1st step - = red or brown on 2nd step																			
Urease	+ = bright pink - = salmon color (no change)																			
Kligler Iron Agar	see lab book: Exercise 5-18, page 311																			
Lysine Decarboxylase	see lab book: Exercise 5-8, page 263																			
Ornithine Decarboxylase	see lab book: Exercise 5-8, page 263																			
DNase Agar	+ = clearing in agar - = no clearing in agar																			
Phenylalanine Deaminase	+ = green color - = no color change																			
Blood Agar	β = clear zone; α = green zone; γ = no change																			
Mannitol Salt Agar	+ salt tolerance = growth + mannitol ferment. = yellow																			
Phenylethyl Alcohol Agar	+ = good growth - = poor to no growth																			
Catalase	+ = bubbles - = no bubbles																			
Oxidase	+ = purple - = no color change																			
Bile Esculin	+ = black - = no color change																			
A disc	+ = zone of inhibition - = no inhibition																			
P disc	+ = zone of inhibition - = no inhibition																			
6.5% NaCl broth	+ = growth - = no growth																			
Eosin Methylene Blue Agar	+ = dark w/ colorless edges - = colorless; E. coli = green																			
Hektoen Enteric Agar	see lab book: Exercise 4-5, page 217																			
MacConkey Agar	+ = red colonies, red agar - = colorless colonies																			