BIO 2420
Intro to Microbiology
Biochemical Test Chart

		Alcaligenes faecalis	Bacillus megaterium	Bacillus subtilis	Enterobacter aerogenes	Enterobacter cloacae	Enterococcus faecalis	Escherichia coli	Klebsiella pneumoniae	Micrococcus luteus	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.																		
Aerotolerance	aerobic, anaerobic, microaerophilic, 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																		
Spore 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)																		
Triple Sugar Iron Agar	see lab book: Exercise 5-21, page 201																		
Arginine Decarboxylase	see lab book: Exercise 5-10, page 171																		
Lysine Decarboxylase	see lab book: Exercise 5-10, page 171																		
Ornithine Decarboxylase	see lab book: Exercise 5-10, page 171																		
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 4-7, page 134																		
MacConkey Agar	+ = red colonies, red agar - = colorless colonies																		

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