

Part I: Lab Practical

1. Types of Leukocytes



2. Identify the Following Tests and answer the questions (probably):

NAME:	Catalase Test	Oxidase Test	Phenol Red (both 24hr) Fermentation Test Dextrose: Lactose: Sucrose:	MR / VP (both 48hr) Fermentation Test		Citrate Utilization Test (slant 48hr)	Urea Hydrolysis Test (slant 24hr)	Nitrate Reduction Test (both 48hr)	Phenylalanine Deaminase Test (slant 24hr)
PURPOSE: (test for)	aerobic bacteria utilize O ₂ as final e- in ETC, MO can synthesize catalase	Identify presence or absence of cytochrome C oxidase	utilize various carbohydrates (glucose, lactose, sucrose)	MO perform mixed acid fermentation	MO ferment glucose	MO utilizes citrate as members of Enterobacteriaceae	MO hydrolyze urea	reduction of nitrate	presence of phenylalanine deaminase diff. members of enterobacteriaceae fam: <i>Morganella</i> sp, <i>Proteus</i> sp, <i>Providencia</i> sp
RESULTS:	2H ₂ O + O ₂	catalyze reduction of cytochrome C by tetramethyl-p-phenylene diamine	pH color change indicator, gas production	stable acid products	acid to acetoin & 2,3-butanediol	citrate permease & citrate lyase	ammonia	nitrate - nitrite nitrate - nitrite - molecular nitrogen	removal of amine group
MEDIA:	slide	Q-tip	differential phenol red broth, Durham tube	MR/VP broth		Simmons citrate agar	urea agar	beef extract, peptone, KNO ₃ , Durham tube	phenylalanine agar
SUBSTRATE:			glucose lactose sucrose	glucose		sodium citrate (C source) & ammonium phosphate (N source)			phenylpyruvic acid
REAGENT/ pH ind.	Hydrogen peroxide 2H ₂ O ₂	chromogenic reducing agent (chem. develops color as it becomes oxidized)	Phenol red pH indicator	methyl red	1% α-naphthol & 40% potassium hydroxide	bromothymol blue pH ind. (in slant)	phenol red pH ind.	sulfanilic acid & α-naphthylamine, zinc	12% ferric chloride
POS. appearance	bubbles	dark blue/purple	yellow = acidic (ferments) bubbles in Durham tube	red color	red	Blue = alkalization	yellow = < 6.8 red = 7.4-8.4	red (both reagents) no color (after adding zinc)	green
NEG. appearance	no bubbles	no color change	No color change, no bubbles	no color change	no color change	no color change	pink = >8.4	red (both reagents + zinc)	yellow
Oxygen Requirement	Obligate aerobe=				Facultative anaerobe=				
	Obligate anaerobe=				Microaerophile=				

Microbiology Lab Study Guide Answers

Brigitte Niedzwiecki, Julie Pepper



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Jacquelyn G. Black,1996 This text follows a body systems approach to microbiology paying attention to real life connections and covering such topics as the characteristics of microbial metabolism growth and genetics Laboratory Fundamentals

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institution has supported instructors and how they have supported themselves as well as the methods used to assess the impact of inquiry guided learning on students faculty and the institution as a whole The book has been written with three audiences in mind instructors who want to use inquiry guided learning in their classrooms faculty developers considering supporting comparable efforts on their campuses and administrators interested in managing similar undergraduate reform efforts It will also appeal to instructors of courses in the administration of higher education who are looking for relevant case studies of reform While this is a model successfully implemented at a research university it is one that is relevant for all institutions of higher education *Laboratory Experiments in Microbiology* Christine L. Case,Ted R. Johnson,1984 **The**

Publishers' Trade List Annual ,1977 Biology/science Materials Carolina Biological Supply Company,1991

Diagnosis and Treatment of Odontogenic Infections James R. Hooley,1983 **Respiratory Care: Patient Assessment and Care Plan Development** David C. Shelledey,Jay I. Peters,2021-02-08 Respiratory Care Patient Assessment and Care Plan Development Second Edition describes the purpose of patient assessment and then guides the reader through the process of reviewing existing data in the medical record *Lab World* ,1976 Laboratory Experiments in Microbiology Ted R. Johnson,Christine L. Case,2004 Newly revised to accompany Microbiology An Introduction Eighth Edition by Tortora Funke and Case this lab manual includes 57 experiments that demonstrate the broad spectrum of microbiology Intended as a manual of basic microbiological techniques this popular lab manual features applications for undergraduate students in diverse areas including the biological sciences the allied health sciences agriculture environmental science nutrition pharmacy and various pre professional programs Experiments have been refined in this new edition to encourage students to develop critical thinking skills as well as learn basic facts and technical skills Material with direct application to clinical and commercial labs is included wherever possible and increased emphasis is placed on lab safety **Scientific and Technical Books and Serials in Print** ,1984 Medical and Health Care Books and Serials in Print ,1997 **Basic Medical Lab Techniques-Iml 4e** Estridge,Ruth Reynolds,2000-05 **Books in Print Supplement** ,1985 *Books in Print* ,1991

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