

PRE-LAB 11: UNKNOWN LAB

You are performing a series of new exoenzyme and biochemical tests this week. Please fill out the table below to help you interpret the test results. Use the links in the lab protocol to guide you.

Test	Purpose	Appearance of positive result	Appearance of negative result
Gelatin			
SIM: sulphide			
SIM: indole			
SIM: motility			
Oxidase			
Methyl red			
Voges Proskauer			
Catalase			

Please fill out the following chart using the information about the tests we will be performing today posted on FOL and from the links. Show your professor this table at the beginning of lab.

pH indicator	Media	Acidic colour	Neutral colour	Alkaline colour
Phenol red				
Bromothymol blue				
Bromocresol purple				N/A

35 marks

Lab 11 Worksheet

UNKNOWN NUMBER or STRAIN NAME (if your environmental isolate or food/water lab isolate) (1 mark):

INTRODUCTION

Introduce your strain: where was it isolated from, using which media, what is it presumed to be
State objectives for this lab or state your hypothesis

- Hypothesis: If this (independent, controlled variable), then that (dependent, measured variable).

RESULTS

Make a figure of the test tube-based tests or insert the images into the table below. These images are data required to confirm your test results. The results must be clear in the image for the reader to see. (5 marks)

- **You will lose a full mark for incorrect interpretation of a test (e.g. you say the blue citrate tube is negative).**

Complete the two tables below.

Table 1: Biochemical test results for your strain 20 marks

Test	Reactions			
	Glucose	Lactose/Sucrose	Gas	H ₂ S
TSIA colour			Observations:	
+/-				
	H ₂ S	Indole	Motility	
SIM colour				
+/-				
	glucose		lactose	sucrose
Carbohydrate fermentation Colour Gas				
+/-				

Decarboxylase broth Colour				
+/-				
	After Nitrate A+B	Zinc dust (if added)	Gas production?	
Nitrate reduction Colour				
Metabolite produced				
	Indole	Methyl-red	Voges-Proskauer	Citrate
IMViC Colour				
+/-				
Gelatin hydrolysis Observations				
+/-				
Enzyme test	Oxidase test	Urease Test	Catalase test	
Reaction				
+/-				

Table 2: Cell morphology results for your strain **3 marks**

Test	Result
Gram stain	Gram reaction:
Wet mount	Motility:

Summarize the results in a few sentences. Remember to not interpret the results, just summarize what was observed. (3 marks)

DISCUSSION

Discuss your results related to the species you think you have identified: **6 marks**

- Compare your results to the probable species (based on isolation media in previous labs) to discuss if this is correct.
- Compare to results posted for species in the respective [FDA chapter](#) and results spreadsheets posted on FOL.
- Discuss if your results are reliable: Do they have internal validity (do they agree with themselves)? Give specific examples of different tests or media testing the same property.