

Semester Unknown Summary I – 1

Names: _____ & _____

Characterization of Semester Unknown – Part I

Each group should prepare 2 identical copies of this characterization.

Keep one copy of Part I for your group record and turn in one copy with your Cytology lab results.

You will be expected to show that you have maintained this same organism as a pure culture at the end of the semester. **Turn in a slide with a good Gram stain of your unknown.**

What was the source of your unknown: _____

Colony characteristics:

Make LARGE drawings to illustrate typical colony features

Pigmentation: _____

Shape: _____

make drawing to illustrate shape of colony:

What is average diameter of the colonies? _____ mm

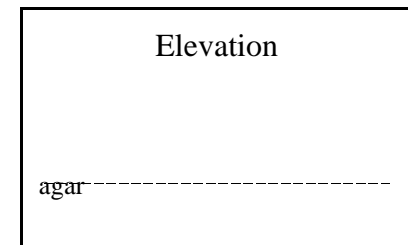
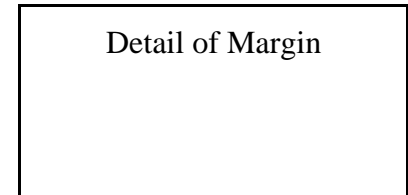
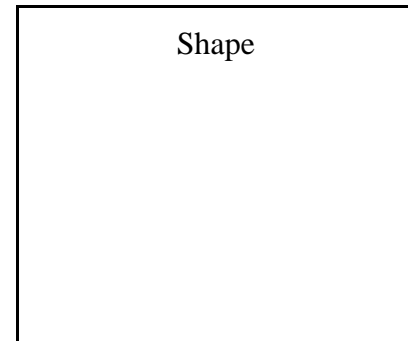
Margin: _____

Draw edge of colony showing detail of margin:

Surface: _____

Elevation: _____

Draw colony from a side view:



Identify any other distinctive characteristics of the appearance of the colonies:

Semester Unknown Summary I – 2

Cell characteristics:

Make a LARGE drawing to illustrate shape and arrangement of cells

Gram reaction: _____

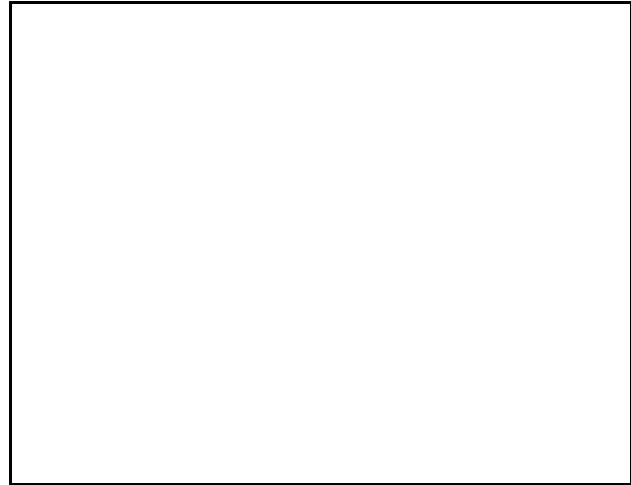
Shape: _____

Arrangement: _____

Size

Avg width: _____ μm

Avg length: _____ μm (N/A if a coccus)



Does it produce endospores?

_____ (y/n): if so, make a large drawing showing shape & size relative to a normal cell:

Is it motile? _____ (y/n)

Grading of Semester Unknowns

1) With the Results of the Cytology lab, each group will turn in a copy of the 'Characterization of Bacterial Unknowns I' pages.

2) At the end of the semester each group will turn in:

(10 pts) Copy of both the 'Characterization of Bacterial Unknowns I and II' sheets. These will be graded for neatness, completeness, and reasonableness of unknown identification.

(10 pts) Two streak plates and Gram stains (one by each student). Grading is based upon evidence that organism is the same one originally isolated and a pure culture.

– each student should turn in a good quality Gram stain of your unknown

– each student should turn in a good quality streak plate of your semester unknown.

Semester Unknown Summary II – 1

Names: _____ & _____

Characterization of Semester Unknown – Part II

Fill out this sheet as you perform tests during this and upcoming lab exercises as a record of your semester unknown. **When you have finished all characterizations of your unknown, your group will turn in this sheet, a two Gram stains of your unknown and two streak plates showing isolated colonies.**

Properties of Unknown

Oxygen requirements _____

Indicate where any of your results
are inconsistent with your
expectations

NH₃ utilization _____ + / -

NO₃ utilization _____ + / -

Purple broth

Lactose fermentation _____ + / - / ⊕(acid & gas)

Glucose fermentation _____ + / - / ⊕

Sucrose fermentation _____ + / - / ⊕

Kligler Iron Results

Lactose fermentation _____ + / - / ⊕(acid & gas)

Glucose fermentation _____ + / - / ⊕

H₂S production _____ + / -

IMVIC

Indole production _____ + / -

Butanediol fermentation _____ + / -

Mixed acid fermentation _____ + / -

Citrate metabolism _____ + / -

Other Tests:

Starch hydrolysis _____ + / -

MacConkey agar results _____

Esculin metabolism _____ + / -

Oxidase _____ + / -

Semester Unknown Summary II – 2

Other Tests, con't

Temperature requirements _____

PYR metabolism _____ + / -

Hemolysis _____ type or -

Coagulase _____ + / -

Catalase _____ + / -

Did you do a Lancefield test on your unknown? Yes / no
If so, what was the result? _____

End of semester characterization:

1. Gram reaction of unknown: _____

2. Shape and arrangement: _____

3. Colony description (requires a good streak plate)

shape: _____

surface: _____

margin: _____

elevation: _____

pigmentation: _____

<u>For Instructor Use</u> Assessment of Semester Unknown
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Characterization _____ / 10

Culture Purity _____ / 10 (streak plate/Gram stain)
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Total points _____ / 20

4. Is your unknown different than what you originally isolated? _____ (yes / no)

5. Is your unknown contaminated? _____ (yes / no)

6. If your answer to either 4 or 5 is 'yes', explain:

