

ADVS Assessment [2019-2020]

Emphasis: Biotechnology

Skills & Career Competencies [SCC]: Learning Outcome [LO] #2

Semester/Course: Spring 2020: ADVS 5160: Cell Culture

Artifact: Lab Report on Sub-culturing Suspension Cells

2. Understand and perform cell culture procedures.

The Lab Report on Sub-culturing Suspension Cells assignment is an assessment of SCCLO #2. The assessment measures the student's ability to understand and perform cell culture procedures.

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04 Lab 4

Topic: Subculturing Suspension Cells

This week we will count and culture some suspension cells and check their viability using the dye trypan blue.

Here is some background on [using a hemocytometer](#).

Here is a [link to this week's lab protocol](#): [Lab 4 - Suspension Cells](#)

(see Protocols 12.5, 23.1 and 24.1 in your textbook for reference protocols for each step; we will use a lab protocol in class)

Remember to write your lab report for this week.

Note regarding cell counting:

To help you count cells, you might want to consider installing an app on your phone or tablet.

There is also a nice "Live Dead Cell Counter" in the google play store for android phones. It seems to work well and even performs calculations for you! <https://play.google.com/store/apps/details?id=com.computing.millenium.springers.livedeadcounter&hl=en>

Please note that you will need to know how to do the calculations on your own (for the exams), so make sure not to rely on the app to do it for you without understanding! **(Disclaimer - installing apps on your devices is at your own risk. :)**

Keeping track of the **population doubling time** is important. Here is an excel template that you can help you do that: [Cell tracking sheet](#)

Videos

Here is a video showing you how to subculture (split or passage) cells. For this week's lab, pay attention to the suspension cell portion of the video.

[6. Subculture](#)



Counting of cells:

[7. Counting of cells using Trypan Blue and a haemocytometer](#)



Lab Reports

Lab Reports

Ten laboratory reports are required for the labs during the semester. Reports should be written in a clear and concise manner and should be submitted to the laboratory instructor. **At least 1 report should be submitted each week, no later than Fridays (5 pm). Late reports submission will result in deductions in the grade.** The laboratory instructor will decide on points deducted for late reports. Reports should be submitted electronically on this canvas page as a word or pdf file.

Note: Even though you are working in groups for your lab exercises, the lab reports are not group assignments. Each student has to write and submit their own report. Copy-pasting from group mates will result in point deduction / zero credit scores.

How to write a lab report

The laboratory report should be written in your own wording using the laboratory protocols in the text book and the handouts as guidelines. It is best to use the following format:

- Title of the experiment
- Introduction
- Materials
- Methods
- Results
- Conclusion
- State the difficulties that you may have faced in performing the protocols if there were any.

Points 10

Submitting a file upload

File Types doc, pdf, and docx

Turnitin Turnitin has been enabled for this assignment.

Due	For	Available from	Until
Jan 31 at 5pm	Everyone	Jan 6 at 12am	Apr 23 at 5:59pm

Criteria	Ratings		Pts
Format is appropriate All essential elements (title, intro, materials, methods, results, conclusions, additional remarks) are present	3.0 pts Full Marks	0.0 pts No Marks	3.0 pts
Length & Detail Protocol is comprehensible and detailed enough to reconstruct the procedure	4.0 pts Full Marks	0.0 pts No Marks	4.0 pts
Terminology & Orthography Correct scientific terms are used, no or very few orthographic errors	3.0 pts Full Marks	0.0 pts No Marks	3.0 pts
Total Points: 10.0			