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NPTEL

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Courses » Principles Of Downstream Techniques In Bioprocess

Announcements

Course

Ask a Question

Progress

FAQ



Unit 6 - Week 4

Register for
Certification exam

Course outline

How to access
the portal

Week 0

Week 1
_Introduction

Week 2

Week 3

Week 4

- Product stabilization, Drying, Lyophilisation
- Precipitation and crystallization
- Electrophoresis / SDS PAGE
- Chromatography
- Quiz : Assignment 4
- Week 4 feedback form

Week 5

Downloads

Interactive
Session

TEXT
TRANSCRIPTS

Assignment 4

The due date for submitting this assignment has passed. **Due on 2019-02-27, 23:59 IST**
As per our records you have not submitted this assignment.

1) salting in is because of

1 point

- pH change
- Change in dielectric constant
- Ionic strength change
- Change in water availability

No, the answer is incorrect.

Score: 0

Accepted Answers:

Ionic strength change

2) In salting out low molecular weight protein precipitates

1 point

- before high molecular weight proteins
- after high molecular weight proteins
- both precipitate at the same time
- molecular weight has no effect

No, the answer is incorrect.

Score: 0

Accepted Answers:

after high molecular weight proteins

3) If the rate of increase in crystal size is 1.35 mm/hr, How long will it take for the crystal size to increase from 4 mm to 7.5 mm -----

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Range) 2.55,2.65

1 point

4) Crystallization is carried out in a stirred tank and the rate of increase in crystal size is 2 mm/hr. How long the crystallizer has to be run to get a dominant crystal size is 50 mm -----

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Range) 8.1,8.5

1 point

5) Which drying is not based on conduction

1 point

- tray
- band
- belt
- drum

No, the answer is incorrect.**Score: 0****Accepted Answers:***tray*

6)

No, the answer is incorrect.**Score: 0****Accepted Answers:***(Type: Numeric) 1.5*

1 point

7) What will be the change in rate of heat transfer (in %) due to conduction if the temperature difference is reduced by one fourth and area increased by a factor of four

No, the answer is incorrect.**Score: 0****Accepted Answers:***(Type: Numeric) 0*

1 point

8) Air is heating a powder by convection, The air and powder temperatures are 60 and 30 °C respectively. The exposed area for heat transfer is 10 m². The overall heat transfer coefficient is given by the relation $U = 0.001 \sqrt{v}$, where v is the velocity of air = 20 cm/sec. Units of U are cal/cm² °C sec. Calculate the rate of heat transfer to the solids from air in kcal/sec

No, the answer is incorrect.**Score: 0****Accepted Answers:***(Type: Range) 13.3,13.5*

1 point

9) Protein A and B travel at velocity of 2 and 3 cm/min during electrophoresis. If molecular weight of protein B is 20KDa what is the molecular weight of protein A

No, the answer is incorrect.**Score: 0****Accepted Answers:***(Type: Numeric) 30*

1 point

10) The retention time of a solute is 10 min and the maximum concentration of the peak is 0.1 mM. If 50% of this concentration is reached in 8 min, determine the



standard deviation -----

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Range) 1.55,1.70



◀ Previous Page

End ▶



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