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Progress

Courses » Proteins and Gel-Based Proteomics

Announcements Course Ask a Question



Unit 5 - Week-3: Twodimensional gel electrophoresis (2-DE)



0.5 points

Course outline

How to access the portal

Introduction to Gel-Based Proteomics

Week-1: Basics of amino acids and proteins

Week-2: Gelbased proteomics and sample preparation

Week-3: Twodimensional gel electrophoresis (2-DE)

- L11. 2-DE: Rehydration, IEF & Equilibration
- L12. 2-DE: Second dimension, staining & destaining
- L13. 2-DE: Gel analysis
- L14. 2-DE: Applications
- L15. 2-DE: Applications (contd.) & Challenges
- Lab session-3.1:Demonstration of gel analysis using IQTL software

Week-3 Assignment-3

The due date for submitting this assignment has passed. Due on 2016-04-13, 23:45 IS As per our records you have not submitted this assignment.

- 1) In two dimensional gel electrophoresis (2-DE) experiment, the equilibration step involves which of the following process?
 - Reduction and then alkylation
 - Alkylation and then reduction
 - Alkylation and reduction together
 - None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Reduction and then alkylation

- 2) Which of the following component leads to the clogging of 0.5 points immobilized pH strip and could form complexes with proteins by electrostatic interactions?
 - Polysaccharides
 - Nucleic acids
 - Lipids
 - All of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of the above

- 3) Your protein sample has a lot of phosphorylated proteins. In this 0.5 points light, which of the following stain would you prefer to use for the detection of phosphorylated proteins specifically?
 - Pro-Q Diamond
 - Coomassie Brilliant Blue
 - Silver stain
 - SYPRO Ruby

No, the answer is incorrect.

Score: 0

Accepted Answers:

Pro-Q Diamond

Week-3
Assignment
Answer Key

Quiz : Week-3Assignment-3

Week-4: Difference gel electrophoresis (DIGE) & Mass spectrometry 4) Sandhya has performed protein extraction using TRIzol method and 0.5 points obtained 720 micrograms of protein from the sample. She has to run two-dimensional gel electrophoresis (2-DE) using 18 cm IPG strip and further wants to identify the proteins using mass spectrometry. Select the closest amount of protein she should be using to start her 2-DE experiment?

- 300-1000 μg
- 125-240 μg
- 1000-1500 μg
- 100-300 μg

No, the answer is incorrect.

Score: 0

Accepted Answers:

300-1000 µg



5) Which of the following pH range IPG strip would you use if your sample contains proteins with acidic pI values?

.5 poi

- 7-10
- 3-6
- 3-10
- 5-7

No, the answer is incorrect.

Score: 0

Accepted Answers:

3-6

6) Rohan when visualized his 2-DE gel after the gel staining, found vertical streaks in the gel. Which of the following factor may cause such streaking pattern in the gel?

Low acrylamide percentage in gel

- Presence of low abundant proteins
- Presence of interfering compounds like salts
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Presence of interfering compounds like salts

7) In a gel there are two proteins with same isoelectric point but they 0.5 points differ in their molecular weight. What will be the position of these protein spots on the gel with respect to each other?

- At same position
- They will be overlapped
- Adjacent to each other
- Vertical to each other

No, the answer is incorrect.

Score: 0

Accepted Answers:

Vertical to each other

8) You ran two protein samples in two separate 2-DE gels. Now you 0.5 points want to study and compare the differentially expressed proteins. Which of the following software can be used for the 2-DE gel analysis?

- Image Master Platinum (IMP7)
- Mascot

U	eins and del-based froteoffics - Form 5 - Week-5. Two-difficulting gerelectrophoresis (2	L-DL)
	Zoom toolImage overlayingSpot analysis	
	No, the answer is incorrect. Score: 0	
	Accepted Answers: Spot analysis	
	14)Which of the following staining dye is NOT compatible with Mass spectrometer?	0.5 poi
	Coomassie Brilliant BlueSYPRO RubySilver stainDual stain	
	No, the answer is incorrect. Score: 0	σ
	Accepted Answers: Silver stain	8
	15]n silver staining, the reaction is stopped by adding?	0.5 points
	methanolacetic acidethanolwater	
	No, the answer is incorrect. Score: 0	
	Accepted Answers: acetic acid	
	16)Which of the following statement(s) is correct about isoelectric focusing (IEF)?	0.5 points
	 Proteins are resolved on the basis of their pl Involves the use of immobilized pH gradient Presence of salts interfere in IEF process All of the above 	
	No, the answer is incorrect. Score: 0	
	Accepted Answers: All of the above	
	17)Which of the following statement(s) is true for Image Quant TL (IQTL) software? (Note: Questions from 17-20 are lab session-based ques	<i>0.5 point</i> s tions)
	 It can remove the background by background subtraction option It can be used for quantitative proteomics study It can employ standards for molecular weight studies All of the above 	
	No, the answer is incorrect. Score: 0	
	Accepted Answers: All of the above	
	18Jn Image Quant TL (IQTL) software, which method is preferred for 1D-gel analysis of complex proteins?	0.5 points
	Automatic	

- Stepwise
- Both a and b
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Stepwise

19Which of the following analysis cannot be performed by Image Quant 0.5 poi TL (IQTL) software?

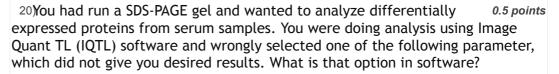


- Colony counting
- Array analysis
- DIGE analysis
- 1D-gel analysis



Accepted Answers:

DIGE analysis



- Fixed the bandwidth
- Automatic bandwidth
- Automatically band detection
- None of the above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Fixed the bandwidth

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