Unit 8 - Week 6 Liquid-Liquid Extraction

Assignment 6

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-11, 23:59 IST.

1) Raffinate will contain *1 point*

- more solute
- less solute
- more solvent
- more extract

No, the answer is incorrect.
Score: 0
Accepted Answers:
less solute

2) Partition coefficient is *1 point*

- > 1
- < 1
- =1
- =0

No, the answer is incorrect.
Score: 0
Accepted Answers:
> 1

3) In the Liquid -Liquid extraction if the two phases are well miscible, then what will be the degrees of freedom from Gibb's phase rule.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 2

1 point

4) Two solutes (A and B) are present in a broth at 1 and 0.5 mM concentration respectively. When a solvent is added for extracting then, 0.6 mM of A and 0.4 mM of B are extracted. What is the separation factor (B to A).

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 2.55,2.7

1 point

5) How many cross-flow extractors are used (answer in next whole number) if we want to extract 99% of solute from broth = 75 l with 2 l solvent. Partition coefficient = 100.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 4

1 point

6) An antibiotic (12 mg) is extracted from an aqueous broth with a solvent , K = 5. What is the % extracted if broth and organic solvent amounts are the same *1 point*

- 80.2
- 83.3
- 89.6
- 81.5

No, the answer is incorrect.
Score: 0
Accepted Answers:
83.3

7) With reference to Q6, if we divide the solvent into two parts and extract twice what will be the % extraction?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 91.4,92.1

1 point

8) How many stages of counter current extractor is needed (answer in next whole number) to extract 90% of the protein. The rate of broth = 450 l/h. It is extracted with 40 l/h solvent. Partition coefficient = 60. How many stages do we require?

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 2

1 point

9) With reference to Q 8, If extraction efficiency is 2, what will be the percentage extraction.

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Range) 66.1,67.0

1 point

10)If I use another solvent in problem 9, so that the partition coefficient is doubled what will be the percentage extraction *1 point*

- 65
- 80
- 70
- 75

No, the answer is incorrect.
Score: 0
Accepted Answers:
80