

CARMEL COLLEGE OF ARTS, SCIENCE AND COMMERCE, NUVEM – GOA

POST GRADUATE DEGREE STUDIES (AFFILIATED TO GOA UNIVERSITY)

M.Sc. (II) Food Technology (Semester III) Examination February 2022

FTO 120 LAB IN FOOD ADDITIVES, ADULTERATION AND TOXICOLOGY

Max. Marks: 15

Duration: 2 hours

Date: : / /2022

INSTRUCTIONS:

1. All questions are compulsory.
2. Figures on the right indicate maximum marks assigned to the question

Q1. A food analyst was asked to check five samples of food for presence for artificial food color. The following results were obtained:

- a. Cotton thread used for acidified sample A turned green.
- b. Cotton thread used for sample B did not absorb any color although the sample was positively adulterated.
- c. Cotton thread used for sample C absorbed red color, but the compound could not be extracted even after double stripping using dilute ammonia.

Provide a reason for each of the following observations.

(3 marks)

Q2. The ADI for aspartame is 40-50 mg/kg body weight/day. A cheesecake sample (5 g) that uses the sugar alternative was analysed. The following data was obtained:

(4 marks)

- a. Plot the following data on a graph. Extrapolate the amount of aspartame present in the sample if its absorbance at 258 nm was recorded as 0.821.
- b. If one serving of the cheesecake is approximately 47g, how many servings of the dessert can a person weighing 80 Kg have without crossing the ADI?

Standard concentrations (mg/ml)	Absorbance (258 nm)
0.1	0.23
0.2	0.31
0.4	0.46
0.6	0.59
0.8	0.75
1.0	0.89

Q3. Two students (M and N) were provided with a beverage sample X and were tasked with quantification of benzoic acid. Student M was able to detect and quantify the preservative in the sample, whereas student N failed at the task. Where do you think student N went wrong?

(2 marks)

Q3. Viva

(4 marks)

Q4. Journal

(2 marks)

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