# NPTEL

reviewer1@nptel.iitm.ac.in ▼

## Courses » Inductive Couple Plasma Atomic Emission Spectrometry ( ICP-AES) for Pollution Monitoring

Announcements Course Ask a Question Progress Mentor

# Unit 5 - Practice and applications of ICP - AES for chemical analysis

# Course outline

How to access the portal

Introduction, Atomic and molecular structure

Interaction of Electromagnetic radiation with matter

Instrumentation of Atomic Emission Spectroscopy

Practice and applications of ICP - AES for chemical analysis

- Practice and applications of ICP AES I -Nebulizers
- Practice and applications of ICP AES - II -Sample handling
- Practice and applications of ICP AES - III -Chemical analysis
- Practice and applications of ICP AES - IV -Chemical analysis
- Practice and applications of ICP AES - V -

The due date for submitting this assignment has passed. Due on 2018-03-07, 23:59 IST.

### Submitted assignment

- 1) Nukiyaman and Tansawa equation shows that the mean droplet diameter of the aerosol **1** point particle is:
  - Directly proportional to the liquid viscosity and inversly proportional to the surface tension of the solvent
  - Inversely proportional to the liquid viscosity and directly proportional to the surface tension of the solvent
  - Directly proportional to the liquid viscosity and surface tension of the solvent
  - Inversely proportional to the liquid viscosity and surface tension of the solvent

#### No, the answer is incorrect.

Score: 0

#### **Accepted Answers:**

Inversely proportional to the liquid viscosity and surface tension of the solvent

2) Concentric and cross flow nebulizers are:

1 point

- Self feedimg without ventury effect
- Not self feeding but with ventury effect
- Self feeding with ventury effect
- Not self feeding but without ventury effect

#### No, the answer is incorrect.

Score: 0

#### **Accepted Answers:**

Self feeding with ventury effect

3) Babington nebulizers are useful whenever the sample contains,

1 point

- Low concentration of the analyte
- High concentration of the analyte
- Low concentration of the dissolved salts
- High concentration of the dissolved salts

#### No, the answer is incorrect.

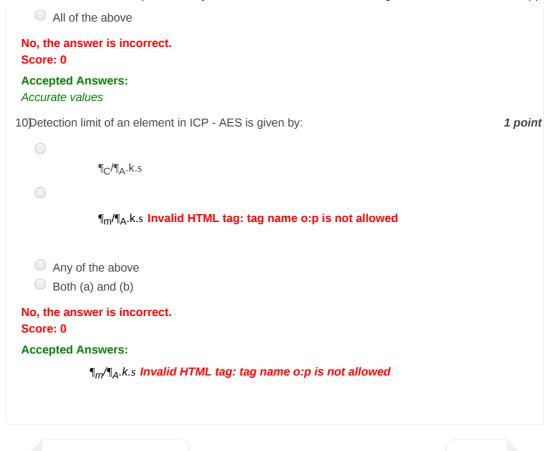
Score: 0

#### **Accepted Answers:**

High concentration of the dissolved salts

4) In ICP a mineral sample containing silica and fluoride is to be ashed and analysed. The best **1** point method of ashing would be:

15/0	Chemical	uple Plasma Atomic Emission Spectrometry ( ICP-AES) for Pollution Monitoring Unit 5 - Pract  With aqua ragia	e and appli
	analysis	○ With HF and HCI	
	<ul><li>Quiz : Week-4</li><li>Assignment</li></ul>	Hot acid digestion in PTFE beakers	
	DOWNLOAD VIDEOS	No, the answer is incorrect.	
		Score: 0	
		Accepted Answers: With HF and HCl	
		5) Multivariate method of calibration of elements is preferred in ICP - AES because,	1 point
		Matrix effects are also taken into account	
		Interference effects are also taken into account	
		Both matrix and interference effects are taken into account	
		None of these	
		No, the answer is incorrect. Score: 0	
		Accepted Answers:  Both matrix and interference effects are taken into account	
		6) ICP - AES is advantageous for chemical analysis of elements because,	1 point
			1 point
		<ul><li>The calibration is linear over several orders of concentration</li><li>The calibration is quadratic or polynomial</li></ul>	
		The calibration is better because an internal standard I used  The calibration is better because an internal standard I used	
		The calibration is linear over same order of concentration  The calibration is linear over same order of concentration	
		No, the answer is incorrect. Score: 0	
		Accepted Answers: The calibration is linear over several orders of concentration	
		7) In ICP - AES, dissociation process frequently takes place between the flame gasses. These ions cause:	1 point
		Enhancement of the analytical signal	
		Decrease in the analytical signal by suppressing the ionization of the analyte	
		No change in the signal if the dissociation produces neutral gases	
		None of these	
		No, the answer is incorrect. Score: 0	
		Accepted Answers:  Decrease in the analytical signal by suppressing the ionization of the analyte	
		8) Back ground correction for interference is possible in ICP - AES because:	1 point
		We can do the calibration using greater resolution to reduce the interference	
		The software for ICP - AEs has powerful routines for deconvolution of overlapping lines	
		Back ground is easily corrected by drawing an appropriated base line	
		Back ground data is already corrected in the computer	
		No, the answer is incorrect. Score: 0	
		Accepted Answers:	
		Back ground is easily corrected by drawing an appropriated base line	
		9) Precision of measurement refers to the closeness of the	1 point
		Accurate values	
		Most probable values	
		True value with / without error	



Previous Page

End



Powered by

A project of

