

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

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Lecture – 22 **Practice and Applications of ICP AES – V – Chemical analysis**

For your benefit, I would like to summarize the whole course what I have thought you about the ICP-AES. And my target audience are all of you, that is students and then professionals and those who is to enter into the realm of environmental pollution control using ICP-AES. It is an analytical tool for the determination of the metal ions in parts per million, parts per trillion and parts per billion.

So, all the 3 milligram per ml, microgram per ml and nano gram per ml, all the 3 systems are possible using ICP-AES. So, in this course what I had try to teach you. So, far is that the first of all I assume that your background could be different. I have spent some time in introducing the subject ah. That is the introductory lecture and we have spent considerable time in learning the atomic structure of the elements. So, that is required because atomic structure is the basis for spectroscopic technique as well as the chemical analysis. So, we have gone through the structure of the atom, how the electrons and other things are arranged around the atom, nucleus, etcetera. And then we have spent considerable time regarding the knowledge of electromagnetic radiation around us and because we use electromagnetic radiation in all ICP all spectrometry.

We have spent, trying to understand the whole electromagnetic spectrum and their properties and their interaction with matter. So, the it is part of our training to understand, what happens to the electromagnetic radiation when the interact with the matter such as such as the dust particles, radiations, catering, glass, presumes, concave gratings, mirrors, etcetera. And we have also spent some time regarding the detection of electromagnetic radiation. So, all this has formed only a part of the course, because I am thinking that the to understand the ICP technique all these things are necessary for the instrumentation. Then we have spent considerable time regarding the actual instrumentation of the Inductive Couple Plasma and AES generation of the plasma, to understand the plasma characteristics, sample introduction and several other related techniques which are specific to the ICP-AES. So, now, I have subsequently, I have also

given you some details regarding the analytical aspects of ah general nature followed by applications of ICP-AES. So, with this kind of information, I am sure you will be able to appreciate the importance of ICP-AES in day to day life as well as in your courier. So, I wish you all the best.

Thank you very much.