

**“Advanced Instrumental Methods of Chemical Analysis” শীর্ষক
০৪ (চার) দিন মেয়াদী সংক্ষিপ্ত বিশেষ প্রশিক্ষণ কোর্সের সারসংক্ষেপ**

কোর্সের পাঠ্য বিষয় (Contents) সমূহের সারসংক্ষেপ:

<i>SN</i>	<i>Topic</i>	<i>Theory (Hour)</i>	<i>Practical / DEMO (Hour)</i>	<i>Total (Hour)</i>
01	Competence of quality control laboratory	2		2
02	Instrumentation of gas chromatograph	2		2
03	Instrumentation & calibration of UV-Visible spectrophotometer		2	2
04	Analysis of heavy metals in water by ICP-OES		2	2
05	Identification of food packaging materials by FTIR		2	2
06	Analysis of Caffeine in Cola Drinks by HPLC		2	2
07	Inert gas analysis for food packages by GC-TCD/FID		2	2
08	Analysis of powder sample & solid surface by EDXRF		2	2
09	Organic sample (clove oil, etc.) analysis by GC-MS		2	2
Grand Total:		4 Hour	14 Hour	18 Hour

প্রশিক্ষণ কোর্সের উদ্দেশ্য সমূহ (Objectives):

1. To know the spectrometric methods of chemical analysis by sophisticated instrument like
 - (a) Ultraviolet-Visible (UV-Vis.) Spectrophotometer,
 - (b) Inductive Coupled Plasma Optical Emission Spectrometer (ICP-OES),
 - (c) Energy Dispersive X-Ray Fluorescence (EDXRF) Spectrometer,
 - (d) Fourier Transformed Infra-Red (FTIR) Spectrometer
2. To know the Chromatographic methods of chemical analysis by using instrument like
 - (a) Gas Chromatograph with Mass Spectrometry (GC-MS),

- (b) Gas Chromatograph with Flame Ionization Detector (GC-FID)
- (c) Gas Chromatograph with Thermal Conductivity Detector (GC-TCD)
- (d) High Performance Liquid Chromatograph (HPLC) with Ultraviolet (UV) Detector.

শিক্ষণ কোর্সের প্রত্যাশিত শিক্ষার ফলাফল (Outcome):

1. Participant will able to operate the sophisticated instrument for chemical analysis
2. To develop chemical analysis method by using above instrument
3. To analyze experimental data
4. To prepare result sheets
5. To decide chemical impact on the job.