

Revised Technical specifications of the Elemental Analyzer

1. Analysis mode options:

Option 1: CHN mode

Option 2: CHNS mode

Option 3: Oxygen mode

2. Upgradeability : The system must be freely upgradable at any time to add additional mode capability to suit the needs of the laboratory.

3. Analysis times CHN: ≤ 6 min, CHNS: ≤ 8 min, Oxygen: ≤ 4 min

4. Sample size ≤ 500 mgs, depending on sample type.

5. Element detection range (mgs)

C ≤ 0.001 - ≥ 3.6

S ≤ 0.001 - ≥ 2.0

H ≤ 0.001 - ≥ 1.0

O ≤ 0.001 - ≥ 2.0

N ≤ 0.001 - ≥ 6.0

6. Analytical performance (based upon organic standards)

Mode: Argon Carrier Gas

Accuracy[%] / Precision [%]

CHN < 0.4 / < 0.3

CHNS < 0.5 / < 0.4

Oxygen < 0.4 / < 0.3

7. Diagnostics : Should monitor electronic and pneumatic components continuously, assuring best instrument performance.

8. Wake-up should allow automatic instrument startup, equilibration and calibration at any operator-selected time and date.

9. Shutdown should allow for the automatic reduction of operating temperatures at operator selected time and date.

9. Gas saver should provides automatic reduction of carrier gas flow rate with a built-in valve at an operator-selected time and date.

10. Automatic weight transfer using ultra micro balance up to at least six number of digits after decimal position (gram)

11. The instrument must be capable of working with Helium as carrier gas.

12. The instrument must also be capable of working with Argon as carrier gas.



13. Filled cylinders (each of at least 47 liters water capacity) one in number for each of the following gases :oxygen, helium and argon, all fitted with regulators must be supplied with the instrument.
14. The supplied instrument must be fully complete and operational along with consumables/kits for at least 2000 experiments.
15. Desk top PC (Intel Corei7 4th Generation/ 6GB Memory DDR3/ 500GB, warranty 3 years onsite), Laserjet Printer with Black-and-white printing, black-and-white copying, black-and-white and colour scanning Print Speed Black: Normal: Up to 14 ppm Duty cycle (monthly, A4): Upto 5000 pages Memory, standard 32 MB Warranty: 1year) and 1KVA UPS Offline with 30min backup for PC Warranty: 1year) must be included with the instrument.
16. One 5 KVA online UPS to be supplied with warranty of 1year to support the instrument for smooth functioning.
17. At least three years warranty for the instrument should be provided by the supplier.

Two handwritten signatures in blue ink are present below the list. The first signature is a cursive name, and the second is a more stylized, blocky signature.