

ADVANCE Automatic Proximate Analyzer Technical and Ordering Information

| Specifications | Automatic Proximate Analyzer Model APA-1 (Dual Furnace) | Proximate Analyzer Model APA-2 (Single Furnace) |
|-----------------------------------|--|--|
| Furnace Type | Dual (Horizontal & Vertical) | Single |
| Furnace Temperature | 0 °C - 1000 °C | 0 °C - 200 °C (Low temperature furnace) 0 °C - 1000 °C (High temperature furnace) |
| Temperature controlling precision | ± 5 °C | ± 5 °C |
| Weight of sample | 0.5g – 1.2 g | 0.5g – 0.7 g |
| Sample number | 19 samples per time | 19 samples per time |
| Testing time | 19 sample in 150 minutes (moisture ash), 7 minute a sample (volatile matter) | 20 minutes per sample |
| Airflow rate | 600-800 ml/min (nitrogen) 500-700 ml/min (oxygen) | 600ml /min (nitrogen), 400 ml/min (oxygen) |
| Output Pressure | 0 – 25 Mpa | |
| Pressure Reading | 0 – 25 Mpa (High Pressure Gauge) 0 – 0.4 Mpa (Low Pressure Gauge) | - |
| Weighing Balance | 120 gm, 0.1 mg accuracy (Two Built-in weighing balance) | 120 gm, 0.1 mg accuracy (Built-in weighing balance) |
| Ash | <10%, 0.2%; 10 – 20%, 0.3%, >20%, 0.4% | - |
| Volatile | <10%, 0.2%; >10%, 0.3% | - |
| Moisture | <3%, 0.2%; >3%, 0.3% | - |
| Power Supply | 220V, 50 Hz | 100 ~260V, 50/60 Hz |
| Power | ≤5KW | ≤2 KW |
| Dimension | 520mm X 500mm X 600 mm (Ash & Moisture Furnace) 500m X 580 mm X 700 ,, (Volatile Matter) | 400mm X 510mm X 640 mm |
| Weight | 65kg (Ash & Moisture Furnace) 80 kg (Volatile Matter Furnace) | 65kg |

(Note: Due to continuous improvement, items shown in photographs / standard accessories are liable to change without advance information.)

Advance : Your source for Fuel Analysis



Automatic Ash Fusibility Analyzer



Isoperibol Automatic Bomb Calorimeter



Automatic Proximate Analyzer



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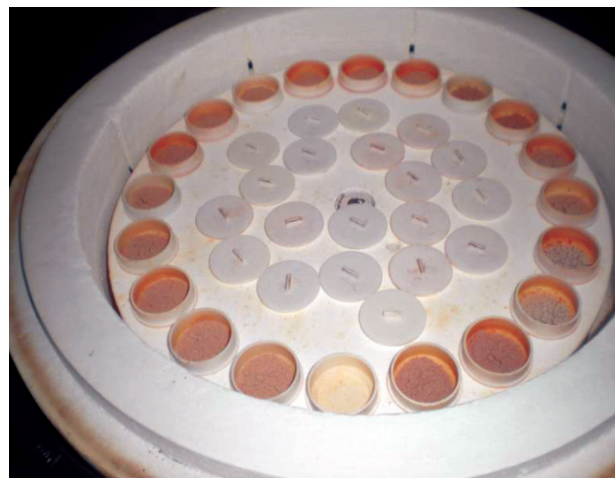
Advance Research Instruments Company



Main Features

- Testing of Air - dry basis Moisture, Ash & Volatile Constituent in Coal
- Can measure upto 19 samples in every experiment.
- Advanced dust suction and exhaust system
- Controlled, Precise and Quick Temperature rise
- Calculation of Calorific Value & Content of Fixed Carbon and Hydrogen in the samples
- Advanced Dual Furnace configuration with built-in high Precision Electronic Scales (AP-1)
- Automatic Data Collection, Tabulation & Printing through PC
- Complete Window Support

Designed to Meet Your Requirements



- * Each furnace in the instrument is integrated with a high precision electronic balance. Using Thermogravimetry principle, the system quickly, automatically and continuously tests 19 samples in every experiment. The Air-Dry basis Moisture and Ash can be tested in around 150 minutes, while Volatile Matter takes around 7 minutes per sample. The system can thereafter automatically calculate the Calorific Value, Fixed Carbon and Hydrogen content of the sample.
- * The user has a choice of Dual Furnace configuration wherein Moisture and Ash are tested in one furnace and Volatile constituent in the other furnace (as per ASTM -).

- * ADVANCE APA Series Fully Automatic Proximate Analyzer is based on thermogravimetry principal for measuring Air - Dry basis Moisture, Ash, Volatile Matter & Calorific Value in Coal.

| Position No | Cru. Wt. | Sp.&Cru. Wt. | Sample No | Start Position: |
|-------------|----------|--------------|-----------|-----------------|
| 1 | 35.8848 | 0.0000 | | 0 |
| 2 | 36.3237 | 37.2288 | 1d | Sample Sum: 20 |
| 3 | 35.9127 | 36.8188 | 1d | |
| 4 | 37.4313 | 38.4397 | 5c | Next Page |
| 5 | 36.0345 | 36.9480 | 5c | |
| 6 | 35.1638 | 36.0784 | 6d | OK |
| 7 | 32.4698 | 33.3743 | 6d | |
| 8 | 0.0000 | 0.0000 | | |
| 9 | 0.0000 | 0.0000 | | Cancel |
| 10 | 0.0000 | 0.0000 | | |

| No | Sample No | Crucible Wt | Sample Wt | Residual Wt | Mad | Aad | Ad |
|----|-----------|-------------|-----------|-------------|------|-------|-------|
| 01 | | 14.7836 | | 14.7868 | | | |
| 02 | 1d | 14.6292 | 0.9017 | 15.0424 | 2.15 | 45.82 | 46.83 |
| 03 | 1d | 14.7707 | 0.9302 | 15.1976 | 2.14 | 45.90 | 46.90 |
| 04 | 3d | 14.8737 | 0.9076 | 15.1643 | 2.16 | 32.02 | 32.73 |
| 05 | 3d | 15.1332 | 0.9446 | 15.4352 | 2.23 | 31.97 | 32.70 |
| 06 | 6d | 14.8324 | 0.9011 | 14.9416 | 1.31 | 12.12 | 12.28 |
| 07 | 6d | 15.0847 | 0.9177 | 15.1975 | 1.14 | 12.29 | 12.43 |
| 08 | | | | | | | |
| 09 | | | | | | | |
| 10 | | | | | | | |

- * The instrument is designed with advanced embedded heating elements and latest high efficiency insulating materials to ensure a steady and uniform heat rise and heat distribution in the chamber.

- * Data collection and calculations are automatically carried out by the computer.
- * Windows based easy to use software which can further be linked to Digital Weighing Scale for auto weight transfer.

| Se. No | Sp. No. | Sp. Wt. | Mad | Aad | Ad | Uad | Ud | Udaf |
|-----------|---------|---------|------|-------|-------|-------|-------|-------|
| 1203-1.01 | 1 | 0.9849 | 2.38 | 44.28 | 45.36 | 11.28 | 11.47 | 21.88 |
| 1203-1.02 | | 0.9261 | 2.40 | 44.28 | 45.37 | 11.16 | 11.43 | 20.93 |
| 1203-1.03 | | 0.9457 | 2.44 | 44.16 | 45.26 | 10.98 | 11.25 | 20.56 |
| 1203-1.04 | 2 | 0.9790 | 1.57 | 48.20 | 48.97 | 13.34 | 13.55 | 26.56 |
| 1203-1.05 | | 0.9771 | 1.59 | 48.14 | 48.92 | 13.33 | 13.55 | 26.52 |
| 1203-1.06 | | 0.9685 | 1.58 | 48.14 | 48.91 | 13.20 | 13.41 | 26.25 |
| 1203-1.07 | 3 | 0.9433 | 1.60 | 43.86 | 44.57 | 14.49 | 14.73 | 26.57 |
| 1203-1.08 | | 0.9731 | 1.60 | 43.87 | 44.58 | 14.49 | 14.73 | 26.57 |
| 1203-1.09 | | 0.9723 | 1.58 | 43.87 | 44.57 | 14.39 | 14.62 | 26.38 |
| 1203-1.10 | 4 | 0.9733 | 2.07 | 40.02 | 40.87 | 11.69 | 11.94 | 20.19 |
| 1203-1.11 | | 0.9202 | 2.08 | 39.96 | 40.81 | 11.85 | 12.10 | 20.45 |
| 1203-1.13 | 5 | 0.9791 | 3.25 | 16.67 | 17.23 | 6.64 | 6.86 | 8.29 |
| 1203-1.14 | | 1.0225 | 3.28 | 16.70 | 17.27 | 6.72 | 6.95 | 8.40 |
| 1203-1.15 | | 0.9992 | 3.28 | 16.58 | 17.14 | 6.80 | 7.03 | 8.49 |
| 1203-1.18 | | 0.9635 | 2.83 | 31.27 | 32.18 | 18.00 | 18.52 | 27.31 |
| 1203-1.19 | | 0.9103 | 2.81 | 31.32 | 32.23 | 17.92 | 18.44 | 27.21 |
| 1204-1.01 | 6d | 1.0071 | 2.04 | 31.82 | 32.48 | 12.79 | 13.06 | 19.34 |
| 1204-1.02 | | 1.0093 | 2.08 | 31.78 | 32.46 | 12.82 | 13.09 | 19.38 |
| 1204-1.03 | 9b | 0.9393 | 3.29 | 27.66 | 28.60 | 26.24 | 27.13 | 38.00 |
| 1204-1.04 | | 0.9873 | 3.30 | 27.62 | 28.56 | 26.27 | 27.17 | 38.03 |
| 1204-1.05 | 11c | 1.0226 | 1.95 | 15.27 | 15.57 | 30.15 | 30.75 | 36.42 |
| 1204-1.06 | | 1.0475 | 1.96 | 15.21 | 15.51 | 29.96 | 30.56 | 36.17 |
| 1204-1.07 | 12c | 1.0527 | 2.99 | 19.62 | 20.22 | 8.73 | 9.00 | 11.28 |
| 1204-1.08 | | 1.0186 | 3.00 | 19.62 | 20.23 | 8.86 | 9.13 | 11.45 |
| 1204-2.01 | 6d | 0.9331 | 2.12 | 31.85 | 32.54 | 4.39 | 4.49 | 6.65 |

Standard Accessories

- Automatic Proximate Analyzer 1 No.
- Platinum Rhodium Probe 1 No.
- Nickel Chromium Probe 1 No.
- Computer with Monitor or Laptop (10") with Printer (Black & White) (Subject to availability & compatibility) 1 No.
- Proximate Crucible (for APA-1 only) 30 Nos.
- Volatile Constituent Crucible (for APA-1 only) 30 Nos.
- 0.4 MPa Decompression Valve 2 Nos.
- Crucible 20 Nos.
- Crucible Bracket 1 No.
- Stainless Steel Crucible Stand 1 No.
- Wrench, Screwdriver & Socket Board 1 No.
- Fuse (30A) & Fuse 3A (For APA-1) 5 Nos each
- Controlling Cable 2 Nos.
- Controlling Cable (for APA-1 only) 4 Nos.
- USB Serial Port (For APA-1 only) 1 No.
- Application Software in CD 1 No.
- Instruction Manual 1 No.