

BWB BIO

For biological applications

Purpose Built Flame Photometer with specialised software, firmware and hardware

The BWB BIO has been created for measuring biological solutions and is modernized for today's research work; which requires routine, quick measurements, with high levels of accuracy for lithium, calcium, sodium and potassium elements.

Our recent release is the combination of several "wish lists" PhD's in Germany, Chile, Colombia, USA and Canada principally in renal research, diabetes and Alzheimer's research. Production reagents and solutions QA and QC are facilitated quickly by our unique simultaneous detection and data processing for all atoms of interest.

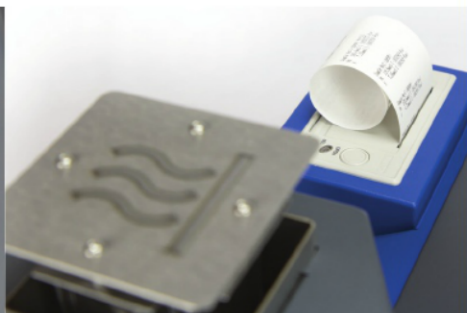
When connected to a PC with the BWB FP-PC app, the user can create .pdf files, .csv files, data presentations and reports that include all the key data. The FP-PC Software also allows setup of the Automatic Fluid Handling System, AFHS, originally designed to work specifically with the BIO unit. The software enables you to view and edit the calibration curves. The intuitive user-friendly operation of the BWB BIO spans all languages and appeals to all levels of users. The BWB BIO is the must-have instrument in today's research laboratory.

For sites that do not allow PCs or data acquisition in the test lab, the Printer provides the "hard copy" required for QA and QC purposes. The environmentally friendly print ink used by the printer has a minimum character capture life of 10 years. The printer is also compatible with other readily available paper stock.



+ FEATURES

- SPECIALLY CONFIGURED FOR A RANGE OF USER INTERESTS
- "IRS" (INTERNAL REFERENCE STANDARD) AVAILABLE
- SINGLE POINT CALIBRATION CORRECTION
- INTERNAL REFERENCE STANDARDS
- 5 AND 6 POINT MULTI-ION CALIBRATION STANDARDS FOR URINE AND SERUM INCLUDED
- ANALYSING LI AND CA ALONG WITH NA AND K
- OPERATOR INDEPENDENT DETERMINATION OF RESULTS
- ADVANCED AUTOMATED DETERMINATION OF RESULTS
- INTEGRATED PRINTER WITH ENVIRONMENTALLY FRIENDLY INK
- IQ, OQ, PQ WEB-BASED CERTIFICATION STANDARD ON BIO AND AVAILABLE ON ALL BWB FES UNITS



Just Add Gas

Technical Data

Just Add Gas

Sample rate

3.5 - 5ml/min

Tubing materials

Silicone and Tygon®

Specificity

Na/K/Li = <0.5% to each other when equal in concentration at <100ppm

Required desk space for Instrument

50cm (H) x 45cm (W) x 45cm (D)

For Safety reasons the Flame photometer requires 1m of unobstructed space above to allow dissipation of heat from the chimney.

Instrument size

BIO Flame Photometer

51cm (H) x 38cm (W) x 41cm (D)
(20in x 14in x 16in)

Shipping

62cm (H) x 55cm (W) x 47cm (D)
(24in x 22in x 19in)

Weight

BIO Flame Photometer 15.3kg

Shipping - BIO Flame Photometer 25kg

Optimal range

Multi-point calibration

Na - 0.0043 - 300mmol/l*

K - 0.0013 - 200mmol/l*

Li - 0.0072 - 20mmol/l*

Ca - 0.025 - 20mmol/l*

*With required Dilution Ratios

Reproducibility

<1% Coefficient of variability for 20 consecutive samples over ten minutes at concentrations of 100ppm equivalent or less. (After instrument stabilisation).

Limit of detection (LOD) and limit of quantification (LOQ)

LOD

LOQ

Na - 0.0013mmol/l Na - 0.0043mmol/l

K - 0.0005mmol/l K - 0.0013mmol/l

Li - 0.003mmol/l Li - 0.0072mmol/l

Ca - 0.0075mmol/l Ca - 0.025mmol/l

Time to stability

Less than 15 seconds after sample is introduced into the flame

Ions measured

Serum Na and K or Li and Ca

Urine Na and K or Li and Ca

Calibration concentrations

URINE

Point 1

Na 25mmol/l

K 25mmol/l

Li 2.5mmol/l

Ca 2.5mmol/l

Point 4

Na 200mmol/l

K 150mmol/l

Li 15mmol/l

Ca 15mmol/l

SERUM

Point 1

Na 120mmol/l

K 3mmol/l

Li 0.5mmol/l

Ca 1.5mmol/l

Point 4

Na 150mmol/l

K 6mmol/l

Li 1.5mmol/l

Ca 3mmol/l

Point 2

Na 50mmol/l

K 50mmol/l

Li 5mmol/l

Ca 5mmol/l

Point 5

Na 300mmol/l

K 200mmol/l

Li 20mmol/l

Ca 20mmol/l

Point 3

Na 100mmol/l

K 100mmol/l

Li 10mmol/l

Ca 10mmol/l

Recommended minimum warm up time based on ambient temperature

21°C - 40 minutes

Power requirements

100V - 250V AC at 50 or 60Hz

Fuel requirement

Propane, Butane or Natural Gas*

regulated to 19Bar. Flow rate of 0.4l/min

*with modifications. BWB Technologies recommends either Propane or Butane for optimum results.

Readout

LCD, four line, alpha numeric, back lit.

+ WHAT'S IN THE BOX*

- USB PC Lead
- Selection of 3 Power cables to suit all regions (4th option for China)
- Gas Hose
- Aspiration Kit
- Manuals covering all aspects of the BIO FP

- Quick Start guides
- Warranty Registration Form
- Certificates of analysis for all provided Fluids
- Material Safety Data Sheets for all provided Fluids
- The FP-PC Software installation USB

- 1L of BWB recommended cleaning solution
- Complete set of calibration fluids including Diluent Concentrate
- 100ml conical flask with screw lid
- 100 disposable sample cups
- 1L of De-Ionised water

- 2m of waste tube
- Set of spare fuses
- 10 x 10ml pipettes
- 10 x 1ml pipettes



PROUDLY MANUFACTURED
AND ENGINEERED IN THE
UNITED KINGDOM

www.bwbtech.com

Manufactured in Newbury, County of Berkshire, England.
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*Subject to change without notice based on local regulations and distributor

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