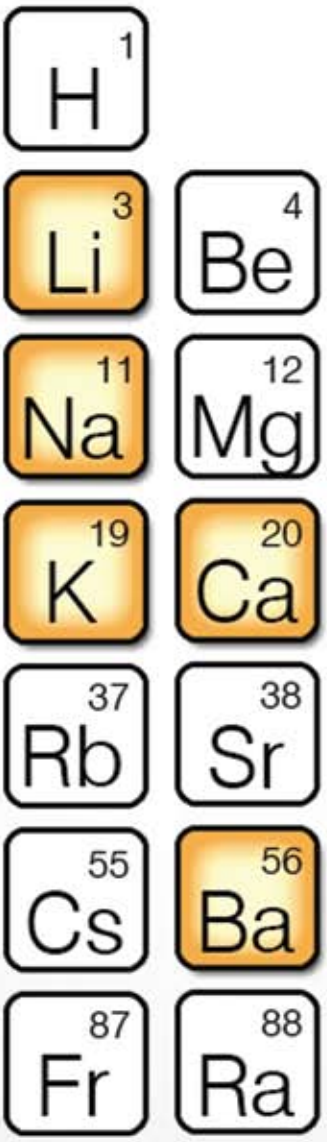
Technologies UK

# BWB-XP Performance Plus

## Flame Photometer





The BWB-XP Flame Photometer is a high quality, high performance instrument employing modern technology to measure alkali and alkaline earth metals Sodium (Na), Potassium (K), Lithium (Li), Calcium (Ca) and Barium (Ba)

# BWB-XP Flame Photometer

## What is a BWB-XP?

The BWB- XP Flame Photometer is a high quality, high performance instrument employing modern technology to measure alkali and alkaline earth metals Sodium (Na), Potassium (K), Lithium (Li), Calcium (Ca) and Barium (Ba)

Liquid samples, when introduced to a flame fuelled by propane, butane, natural gas or lpg, will emit light of a specific wavelength, the intensity of which will be proportional to the concentration of the ions present. The principle has been understood for over one hundred years, but the BWB-XP brings 21st century technology to the technique, making analysis more reliable, accurate and simple than ever before.

The product has many unique built-in features:

- Filters for Na, K, Li, Ca and Ba are all included as standard.
- Simultaneous detection and display of all five elements.
- Simple two point or multi-mode calibration is possible, eliminating the need for paper based calibration graphs.
- Choice of calibration units: ppm, mg/l, meq/l, mmol/l.
- Display resolution is menu selectable for each analyte.
- Unit retains calibration values when in use.
- A quiet on-board compressor giving a totally integrated system.
- RS 232 and USB computer interfaces.
- Windows based, FP-PC allows PC connection for data logging, GLP reporting format, file retention and internet sharing of data.
- Analog output 0-1V
- Flameout and automatic shutdown facility giving unbeatable safety provision.
- Universal voltage and frequency input.
- Can be used with propane, butane, LPG and natural gas.
- Fully CE Compliant.
- Instruction and methods book provided.

BWB Technologies is a UK based company established by experienced professionals from the instrumentation business. The BWB-XP design is a distillation of decades of hands-on, flame photometry expertise throughout the design, manufacturing and support functions. Manufacturing activities are based in the UK where close control of quality is given extreme emphasis.

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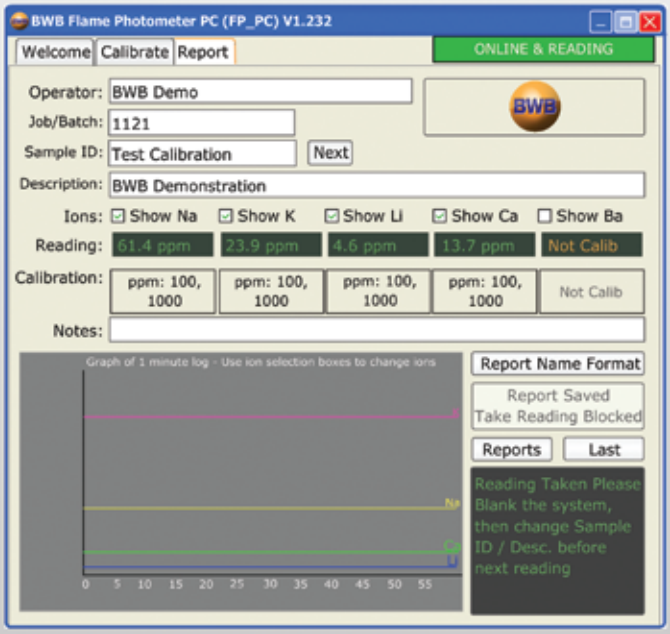
## Why Choose the BWB-XP Flame Photometer?

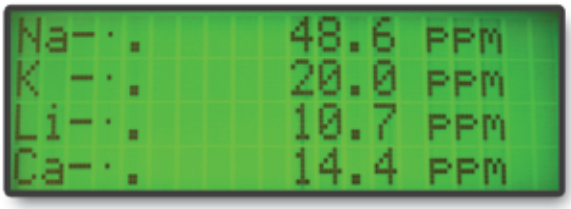



Many laboratories now need to collect and report results using centralised or local computerised systems, the BWB-XP has been configured to easily satisfy the most sophisticated requirements. The hardware features both USB and RS 232 outputs. The FP-PC software package, included with every purchase, facilitates the downloading of data in PDF format (95, 2000, XP and Vista compatible) to a PC

The software has been written with GLP compliance in mind. Results include:

- full details of results
- date and time stamping
- sample references and operator identities
- a facility for laboratory identifiers to be added

Ease of use has been designed into the BWB-XP with a clear liquid crystal display which guides a user through an analysis using simple menu options. The display, used in conjunction with the comprehensive membrane switch panel ensures that accurate and reliable results can be obtained with the minimum of training.




The need for maintenance of the product has been minimised, but where routine attention is needed, the design ensures that this can be undertaken with a minimum of inconvenience by non-specialist staff. The nebuliser and mixing chamber assemblies can be separated from the instrument without the use of tools and cleaning is very easy.


## What Will it Come With?

The BWB-XP is shipped with a complete range of accessories and consumables. Included are a full set of concentrated calibration standards, deionised water, a non-ionic surfactant, volumetric flasks and pipettes to ensure accurate and easy provision of standard solutions. Sample cups and all necessary interfacing cables and tubing are also provided. The BWB FP-PC described above, is included with each purchase. A user has only to provide a fuel gas supply which can be propane, butane or LPG. Natural gas can also be used but an alternative regulator needs to be specified.

A "Guide to Flame Photometer Analysis" supplied with each purchase provides details on the principles of flame photometry along with methodology for some common applications. Our support team is also available to help with any applications questions.

Further copies of this brochure available at http://www.bwbtech.com

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## BWB-XP Performance Plus

### Flame Photometer Specification

| | |
|---|---|
| **Linearisation:** | Included in the software, and available on any of the 5 elements. Achievable on both single and Multi Point calibrations. |
| **Aspiration Rate:** | 3.0-5.5ml/min |
| **Optimum Range:** | Single Point Calibration<br>Na - 0.05 - 60ppm<br>K - 0.05-100ppm<br>Li - 0.1-50ppm<br>Ca - 2.5-100ppm<br><br>Multi Point Calibration<br>Na - 0.05 - 1000ppm<br>K - 0.05 - 1000ppm<br>Li - 0.1 - 1000ppm<br>Ca - 2.5 - 1000ppm<br>Ba - 30 - 3000ppm |
| **Reproductibility:** | <1% coefficient of variability for 20 consecutive samples over 10 minutes (after instrument stabilisation) at concentrations of 100ppm or less. |
| **Limits of Detection:** | Na - 0.02ppm<br>K - 0.02ppm<br>Li - 0.05ppm<br>Ca - 1.0ppm<br>Ba - 10ppm |
| **Time to Stability:** | Less than 15 seconds after sample is introduced into the flame |
| **Drift:** | Less than 1% per 30 minutes after instrument stabilisation |
| **Specificity:** | Na/K/Li = <0.5% to each other when equal in concentration at <100ppm |
| **Number of Parameters Measured:** | Simultaneous display of Na, K, Ca, Li, Ba. |
| **Dimensions:** | 51cm high x 38cm wide x 41cm deep<br>weight: 14kg<br>Packaged: 27kg |


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