



*BWB Technologies*

BWB XP

A five channel digital flame photometer



The BWB XP is the first and **only** 5 channel flame photometer with simultaneous detection and display of all 5 elements. A high quality and high performance instrument, the BWB XP employs modern technology to improve both accuracy and stability while significantly reducing analysis time.

**The BWB XP - the greatest advance in flame photometry for 30 years!**



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## The BWB XP Flame Photometer

**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). Although the principles of flame photometry have been understood for over 100 years, BWB brings 21st century technology to the technique. With the XP, analysing samples and running calibrations are more reliable, accurate and easier than ever before.**

**The BWB XP is the first and **only** instrument to include an on-board air compressor and all the accessories required to run the system straight out of the box. All you need to do is... **just add gas!****

### The benefits of the BWB XP

Introduced in 2005, hundreds of units have been sold all over the world. Today the BWB XP is recognised as the market leading flame photometer and offers many unique features new to flame photometry.

- Simultaneous detection and display of Na, K, Li, Ca and Ba.
- With a quiet on-board compressor included, the XP is a totally integrated instrument which can be set-up and ready to operate in minutes.
- Retention of calibration values means that users can cut calibration times by up to two thirds!
- Single 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, units), offers exceptional flexibility. The XP is suitable for many different types of industries and applications.
- Powerful Windows-based, FP-PC software is included at no extra charge, this allows PC connection, data-logging, GLP reporting format, file retention and internet sharing of data.
- World leading safety provisions including flame out and automatic shut down, makes the BWB XP an exceptionally safe and reliable instrument, even in the most hazardous of environments.
- Universal voltage and frequency input means the instrument can be operated in any country and is supplied with a complete set of power leads.
- Use with propane, butane, LPG and natural gas (with modifications), the BWB XP is suitable for a very wide range of applications and environments.
- The BWB XP is fully CE compliant.

### About BWB Technologies

BWB Technologies is a global company with offices in Europe, the Middle East and the Americas. The company was formed by experienced professionals from the instrumentation market. The design is a distillation of decades of hands on flame photometry experience.

All BWB products are manufactured at modern production facilities in the UK to the following quality management systems, standards and guidelines: BS EN ISO 9001:2008. Our skilled production and quality team follow rigorous procedures, ensuring all instruments are fully tested and performing perfectly before they are shipped to our customers.

BWB technologies are proud of our world-class after sales support. The support team are available to answer any questions you might have and can offer help and advice setting up, maintaining and using your BWB XP flame photometer. All BWB products are supplied with a standard 12 month warranty, extended service contracts are available upon request. (Please note that support contracts may not be available in all countries).



Photometer

Calibrate Report

BWB Demo

1121

D: Test Calibration

BWB Demonstration

Show Na Show K

61.4 ppm 23.9 ppm 4.6 ppm

ppm: 100, 1000 ppm: 100, 1000 ppm: 100, 1000

Notes: Use ion selection boxes



48.6	PPM
20.0	PPM
10.7	PPM
14.4	PPM

## Reasons to choose the BWB XP flame photometer

### Huge increases in laboratory efficiency

As the BWB XP is the first and only flame photometer to offer simultaneous detection and display of all five elements, our customers do not need to waste valuable time changing filters and re-calibrating when a different measurement is required. Customer reports indicated that in some circumstances analysis times have been reduced by over 60%.

A small footprint means that the BWB XP also saves bench space which is often limited in a laboratory or mobile environment.

### New modern technology offers increased accuracy and reliability

Introduced in 2005, the BWB XP flame photometer was designed from the ground up, using new, innovative and modern technology to give unsurpassed levels of accuracy, usability and reliability.

With clean lines and contemporary bright colour schemes, the XP looks exceptionally modern and will fit into any laboratory. The instrument has large LCD displays which can be easily viewed from any angle. The large pressure sensitive keyboard on the XP allows users to quickly and easily navigate through the menu system saving time and increasing efficiency. The Development team succeeded in one of the most challenging design criteria, simple intuitive operation with levels of increasing complexity for a wide variety of users needs and skill sets.

### Computer connectivity as standard!

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 IT requirements. The instrument features USB outputs. The FP-PC software package, included with every purchase, is compatible with every major version of Microsoft Windows.

The powerful software has been written with GLP compliance in mind and facilitates the creation of data and reports in PDF format.

### Ease of use

The BWB XP is exceptionally easy to use, a clear liquid crystal display guides users through an analysis using simple menu options. The display, used in conjunction with a comprehensive membrane switch panel ensures that accurate and reliable results can be obtained with minimal training.

As modern businesses may experience a large turnover of staff, laboratory managers will appreciate the comprehensive training DVD supplied with every BWB flame photometer. This high-resolution, professionally produced video offers new users a step-by-step guide to the most common features of the BWB instrument.

### Easy to maintain and service

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

### Just add gas!

Another area where BWB have revolutionised the flame photometry market is by offering an instrument with all accessories supplied as standard. This means that the process of ordering a BWB flame photometer is incredibly simple. There are no complex product codes, accessory lists or ordering requirements. When you order a BWB XP flame photometer it will arrive with all the accessories you need. 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 application questions.



# BWB XP

## 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

3-5.5ml/min

### Optimal Range

Single Point Calibration

Na - 0.05 - 60ppm

K - 0.05 - 100ppm

Li - 0.1 - 50ppm

Ca - 2.5 - 100ppm

Multi Point Calibration

Na - 0.05 - 1000ppm

K - 0.05 - 1000ppm

Li - 0.1 - 1000ppm

Ca - 2.5 - 1000ppm

Ba - 30 - 3000ppm

### Reproducibility

<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

K - 0.02ppm

Li - 0.05ppm

Ca - 1.0ppm

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.

### Size

Instrument = 51 cm high x 38 cm wide x 41 cm deep (20 in x 14 in x 16 in)

Shipping = 62 cm high x 47 cm wide x 47 cm deep (24.5 in x 21.5 in x 18.5 in)

### Weight

Instrument = 17 kg (38 lbs)

Shipping = 29 kg (64 lbs)



**Tech**nologies

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