# сидел индустриал оод

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# Индикативно предложение по пазарна консултация № 49406 с предмет "Доставка на пламъков фотометър"

| № по<br>ред | ID на<br>Възложителя | Описание и технически характеристики на предлаганото изделие | М.ед. | K-BO | Ед. Цена,<br>лв., без ДДС | Стойност, лв.,<br>без ДДС |
|-------------|----------------------|--|-------|------|---------------------------|---------------------------|
| ъ           |                      | ВWB-XP Пламъков фотометър                                    | бр.   | ь    | 24 973,00                 | 24 973,00                 |
|             |                      | В комплект с: 5 едновременни детектора за Na. K. Li. Ca. Ba: |       |      |                           |                           |
|             |                      | Газов регулатор, Въздушем филтър;Сифон, свързващи тръби,     |       |      |                           |                           |
|             |                      | ръководство за работа,                                       |       |      |                           |                           |
|             |                      | Компютърен интерфейс (с интерфейсен кабел).                  |       |      |                           |                           |
|             |                      | Вграден стартов пакет, включващ:                             |       |      |                           |                           |
|             |                      | Концентрат на разредителя (500 ml),                          |       |      |                           |                           |
|             |                      | Decon 90 (150 ml)  |       |      |                           |                           |
|             |                      | Натриев стандарт 10 000 ppm (150 ml)                         |       |      |                           |                           |
|             |                      | Стандартен калий 10 000 ppm (150 ml)                         |       |      |                           |                           |
|             |                      | Литиев стандарт 10 000 ppm (150 ml)                          |       |      |                           |                           |
|             |                      | Стандартен калций 10 000 ppm (150 ml)                        |       |      |                           |                           |
|             |                      | Бариев стандарт 10 000 ppm (150 ml)                          |       |      |                           |                           |
|             |                      | Пипети (1 ml) — 10 бр.                                       |       |      |                           |                           |
|             |                      | Пипети (10 ml) — 10 бр.                                      |       |      |                           |                           |
|             |                      | Мерителна колба от 100 ml — 1 бр.                            |       |      |                           |                           |
|             |                      | Чаши за проби — 100 бр.                                      |       |      |                           |                           |
|             |                      | Принтер  |       |      |                           |                           |
|             |                      | AFHS връзка  |       |      |                           |                           |
|             |                      |  |       |      |                           | 1                         |

| 74 243,00 | Обща стойност, лв., без ДДС | стойнос | Обща |   |   |
|-----------|-----------------------------|---------|------|---|---|
| 7 000,00  | 7 000,00                    | 1       | бр.  | Монтаж, обучение  | 4 |
|           |                             |         |      | (не може да се използва без семплера)                       |   |
| 12 682,00 | 12 682,00                   | 1       | бр.  | опция:  | ω |
| ,         |                             |         |      | комплект.   |   |
|           |                             |         |      | Пълен комплект от тръби, 2,5 л резервоар със смукателен     |   |
|           |                             |         |      | флакони за проби.   |   |
|           |                             |         |      | В комплект с: 89 табла за проби за 5 ml флакони. 1000х 5 ml |   |
| 29 588,00 | 29 588,00                   | 1       | бþ.  | Автоматичен семплер, 89 проби, 5 ml                         | 2 |

Срок на доставка - до 150 календарни дни Условие на доставка - DDP "АЕЦ Козлодуй" ЕАД

Жизнен цикъл: 25 години

Гаранционен срок: 12 месеца от датата на доставка

Време за реагиране при оказан дефект: 45 дни

04.07.2022

Време за отстраняване на дефекта: до 60 дни от датата на надлежно призната гаранция

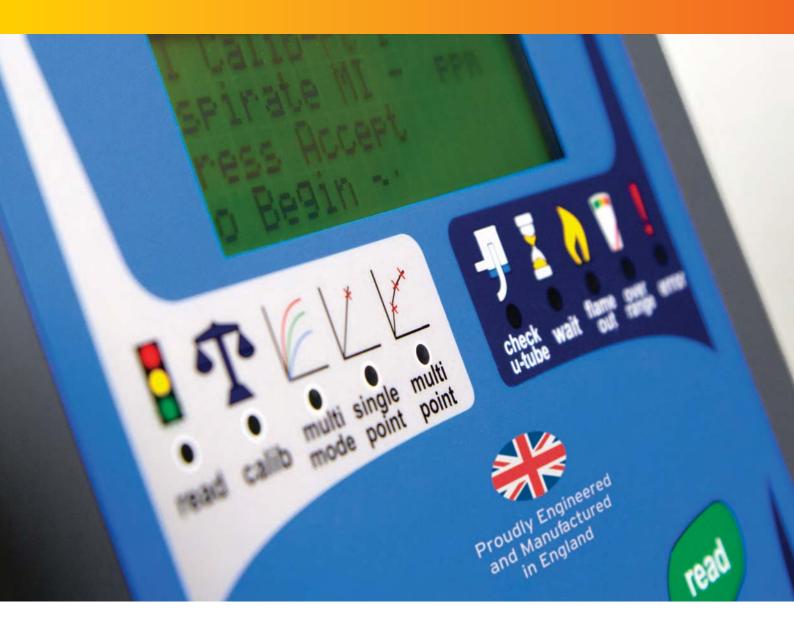
Съпроводителна документация при доставка: Приемо предавателен протокол; Фактура; Ръководство за употреба

заличено на основание 33ЛД

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# The New Digital BWB Flame Photometer Range Innovative, World Leading Technologies

















Not just better than the other flame photometers - BWB offers a cost effective, accurate and reliable alternative to other technologies...

# A flame photometer better than ICP, AAS and ISE analysers

Not just better than the other flame photometers - BWB offers a cost effective, accurate and reliable alternative to other technologies such as Inductively Coupled Plasma (ICP) and Atomic Absorption Spectrophotometers (AAS) and Ion Selective Electrode (ISE) Analysers .

Many of our customers already own an AAS or ICP, but choose to measure Lithium, Sodium, Potassium, Calcium and Barium with their BWB flame photometer rather than the more expensive and complex instruments. This decision saves them time & money as well as increasing the accuracy and reliability of their results.

# What is a flame photometer?

BWB flame photometers are used for measuring Lithium, Sodium, Potassium, Calcium & Barium in many different industries including

- Cement Beverage Pharmacies in Clinics Medical Schools
- Petrochemical Paper Fertiliser Wine Food Nuclear Power Stations • Salt and Potassium Mines • Sugar Industry.











# Common BWB flame photometer features

All BWB products are built around the same innovative product design and world leading technologies, sharing the same core features across the range.

# Just add gas!

BWB have revolutionised the flame photometry market 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 flame photometer it will arrive with all the accessories you need.

# Up to 5 channels of simultaneous detection and display

The ability to measure and calibrate up to 5 different ions at the same time offer huge advantages over more traditional instrumentation. As the BWB is the first and only flame photometer to offer simultaneous detection and display, our customers do not need to waste valuable time changing filters and re-calibrating when a different measurement is required.

# Built-in air compressor

Greatly reduces noise and laboratory footprint while increasing instrument stability, accuracy and reproducibility.

# Advanced calibration system

The ability to store calibration data and perform multi-mode calibrations reduces analysis time significantly.

# Interfaces

Connect to your PC using either USB or RS232. A 0-1 volt output is available for a chart recorder, or for process control, a 4-20mA output can be made available.

# User selectable units of measure

ppm, mmo/l, mg/l and meg/l



# **BWB SUGAR**

# Flame photometer for the sugar industry



In keeping with the published papers from 1977 forward, potassium detection is afforded with up to 4 channels of detection for extreme accuracy along the range of potassium control. Alternatively a combination of sodium, lithium, calcium and potassium is offered as standard for the researcher as well as the production processor.

This powerful and growing global industry now has the attending facilities for Synthetic Fuels or Bio-Fuels production as well from the harvest of the beet or cane. For this derivative product BWB Technologies offers a hybridised Flame Photometer we have named SynFuels. Depending on the portion of the bio conversion that is desired to measure, special chemical resistant tubing comes standard on the BWB FP.

# **BWB NUCLEAR**

# Flame photometer for the nuclear industry



The measurement of lithium at low concentrations within nuclear power stations has been identified as an application perfectly addressed by a new specialty flame photometer - The BWB Nuclear.

# The most accurate and advanced lithium flame photometer ever manufactured!

The BWB flame photometer has always been renowned for super stable and accurate lithium measurement.

Now this winning formula has been improved with a novel adaptation and optimisation of the proprietary BWB optical array detection systems which allows four channels of lithium measurement. This latest configuration has been specifically designed to specification laid out by leading experts within the nuclear power industry.

# **BWB WINE**

# Flame photometer for the wine industry



With our new "Light Pipe Technology" and multiple calcium detectors system, we are now able to meet the rigid standards of calcium detection in wine as this additive is blended in and then removed out in processing. Of course our potassium and sodium channels are also specified for this important industry as well.

The BWB Wine flame photometer not only offers a superior analytical instrument for the industry but is also a vital tool for optimising product quality through early detection and measurement of these key elements.

# **BWB AFHS**

# Intelligent automation with the BWB Automatic Fluid Handling System



Our diversified customers rely on their BWB Flame Photometers for accuracy and reliability. In many modern laboratories and industries there is the need for multiple sample measurement and accurate measurement and recordation of the atoms of interest detected by the BWB FP program.

The BWB AFHS program provides the fluid handling system to match our Award Winning Flame Photometers. Our proprietary "Auto Read" technology has been developed to make intelligent decisions based on exact measurements and drives the AFHS system from sample to sample and is available with all BWB FPs in our program.

### Printer

The BWB Printer provides on demand printing of results from any of the BWB FPs. This device is perched atop the Flame Photometer to preserve our small footprint on the workbench. We utilise a recently developed Environmentally sensitive thermal paper that has a guaranteed 10 year print life. Print characters include: instrument model and serial number, sample number, date, time, results, tray ID (with the AFHS) and calibration data.



# **Specifications**

#### Sample rate

3.5 - 5ml/min

### **Tubing materials**

Silicone and Tygon®

### 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

XP 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

XP Flame Photometer - 15.3kg (33.7lbs) Shipping - 25kg (55.1 lbs)

# Optimal range

Single point calibration

Na 0.1 - 60ppm

K 0.05 - 100ppm

Li 0.05 - 50ppm Ca 1.0 - 100ppm

Ba 1.6 - 100ppm

Multi Point Calibration

Na 0.1 - 1000ppm

K 0.05 - 1000ppm Li 0.05 - 1000ppm

Ca 1.0 - 1000ppm

Ba 5.0 - 3000ppm

# Reproducibility

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

# Specificity

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

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

LOD LOQ
Na - 0.03ppm Na - 0.1ppm
K - 0.02ppm K - 0.05ppm
Li - 0.02ppm Li - 0.05ppm
Ca - 0.3ppm Ca - 1ppm
Ba - 1.6ppm Ba - 5.0ppm

# Time to stability

Less than 15 seconds after sample is introduced into the flame

#### lons measured

Simultaneous measurement of Na, K, Li, Ca, Ba

### Interfaces

USB

O-1 volt output (based on sample concentration linked to element of users choice)

Optional 4-20mA output in place of the above Optional integrated printer

Optional external compressor

Resistance spray chamber nebulizer suitable for acidized samples

.csv and .pdf generated reports and files via FP-PC software

Organic samples

Special for better detection (5x same detector) Low due point due air, due to special design.

# Recommended minimum warm up time based on ambient temperature

21°C - 40 minutes

# Power requirements

100V - 250V AC at 50 or 60Hz automatically selecting

# Fuel requirement

Propane, Butane or Natural Gas\* regulated to 19 mBar. 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.









# **BWB UK**

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