

# lion alcolmeter® 500



*...a breath alcohol instrument for field use - anywhere!  
...fast ...simple ...accurate!*

## Instrument Features

- **SIMPLE TO USE:** the **lion alcolmeter® 500** is fully automatic. This means it's simple to use, so training requirements are minimal.
- **FAST ACCURATE ANALYSIS:** using the Lion fuel cell sensor. This ensures a high specificity to alcohol, with a long and stable working life.
- **EASY TO READ DISPLAY:** breath alcohol readings are clearly shown on a large, illuminated graphics display.
- **LAST TEST RECALL:** the result of the last breath test can be recalled at anytime.
- **TRUE EVIDENTIAL CAPABILITY:** the **lion alcolmeter® 500** may be used for fast subject screening. However, depending on the user's criteria, it may also be suitable for **evidential** analysis.
- **CALIBRATION SECURITY:** by means of a hidden push-button sequence.
- **ERGONOMIC DESIGN:** the **500** is comfortable to hold, and is genuinely pocket size.
- **LOW POWER CONSUMPTION:** the **500** is energy efficient: just two AAA cells give around 400 breath tests.
- **SIMPLE, LOW COST MOUTHPIECE:** so low cost per test! In fact, the **500** uses the same pressure mouthpiece as the **S-D2/S-L2**: these are supplied individually and hygienically wrapped.

# Simple Operating Procedure!



**1**  
**SWITCH ON:**  
**AUTOMATIC SELF CHECK**



**2**  
**ATTACH MOUTHPIECE:**  
**INSTRUCT THE SUBJECT**



**3**  
**THE SUBJECT BLOWS**



**4**  
**NOTE ALCOHOL READING**

## Advanced Specifications and Features

- **ANALYTICAL PRINCIPLE:** Lion fuel cell sensor for alcohol analysis. Unaffected by acetone, hydrocarbons, non-alcoholic food and drug vapours, and all other likely breath contaminants.
- **MEASURING RANGE:** 0.02 to 2.00mg/litre; .005 to .400% BAC [g/210 litres]. An over-range indication is given at higher levels.
- **BREATH SAMPLING:** the **500** automatically samples deep-lung air. An optional Manual override feature may also be used, if required.
- **ANALYTICAL RESPONSE TIME:** normally within 30 seconds, but within 5 seconds at the 'zero' alcohol level.
- **RECOVERY TIME:** approximately 100 seconds at 0.50mg/l.
- **OPERATING TEMPERATURE [Optimum]:** -5 to +40°C.
- **STORAGE TEMPERATURE:** -20 to +65°C.
- **POWER SUPPLY:** two AAA cells provide sufficient power for around 400 breath tests. Two stage low power warning system.
- **HUMIDITY:** 10 to 95%, non-condensing.
- **BAROMETRIC PRESSURE:** 600 to 1,300hPa.
- **CALIBRATION:** recommended every 6 months, using either a wet-bath simulator, or an **AlcoCal**<sup>®</sup> dry-gas standard. Automatic, security-protected procedure.
- **DISPLAY:** LCD graphics, dimensions 45mm x 21mm, 128 x 64 pixels, with backlighting.
- **AUDIBLE BEEPER:** gives auxiliary warning messages.
- **MICROCONTROLLER:** H8/3664.
- **MEMORY:** the last test is stored in memory, for later recall if required.
- **WARM-UP TIME:** the instrument is not heated, so there is no warm-up time - at **any** ambient temperature.
- **DISPOSABLE MOUTHPIECE:** simple disposable 'pressure' tube, the same as used with the **S-D2/S-L2**.
- **RFI CERTIFICATION:** exceeds requirements of EN 50081-1 : 1992 (emission) and EN 50082-1 : 1997 (immunity)
- **VIBRATION AND SHOCK:** meets IEC 68-2-27 Part 2.1 Test EA: and IEC 68-2-6 Part 2.1 Test FC.
- **CASE CONSTRUCTION:** impact resistant ABS.
- **SOFTWARE CONFIGURATION:** various software settings may be configured by Lion or the local **Distributor** using an external PC and **Config-500**, such as:
  - \* alcohol units
  - \* blood:breath ratio
  - \* auto-off time
  - \* breath discard volume
- **DIMENSIONS:** 125mm x 65.4mm x 15mm.
- **WEIGHT:** approximately 140g, including batteries.

## Disposable and Accessory Items

- **DISPOSABLE MOUTHPIECES:** individually wrapped.
- **USER HANDBOOK:** covers all aspects of operation.
- **SERVICE MANUAL:** for authorised personnel only.
- **PROTECTIVE POUCH:** in either grey or yellow leather. Please Note: this item is supplied as an **optional extra** only.
- **ALCOCAL**<sup>®</sup>: a convenient calibration standard.
- **WET-BATH SIMULATOR:** an alternative to the **AlcoCal**<sup>®</sup>.



**lion alcolmeter<sup>®</sup> 500 and accessory items**

## Ordering Information

The **lion alcolmeter<sup>®</sup> 500** is supplied as a complete **delivery unit**, each unit consisting of the following items:

- \* instrument
- \* wrist-strap
- \* user handbook
- \* 4 mouthpieces
- \* 'Alcohol in the Human Body' book



INVESTOR IN PEOPLE



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Complies with directive  
93/42/EEC



FM 25502  
CERTIFIED TO  
INTERNATIONAL QUALITY  
STANDARD ISO 9000:  
EN 29000 : BS 5750