

# lion alcolmeter®SD-400



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



```
*****
*****
*****
lion alcolmeter SD-400F

Serial No.: 024621 D
User Re: No.: 0000

Last Calibration:
18:58 20/09/99

Last Calibration Check:
00:03 21/09/99

SUBJECT BREATH TEST

Date: 07/12/99
Time: 23:55
Test No.: 0005

Blank Check: BAC
Subject: XBAC
.000
.000

Subject's Name:

.....
Operator's Name:

.....
Location:

.....
Subject's Signature:

.....
Operator's Signature:

.....
*****
*****
*****
```

## Instrument Features

- **SIMPLE TO USE:** the lion alcolmeter®SD-400 is fully automatic. This mean it's very simple to use, so training requirements are minimal.
- **FAST, ACCURATE ANALYSIS:** using the Lion *fuel cell* sensor. This ensures high specificity to alcohol, and a long stable working life.
- **EASY TO READ DISPLAY:** alcohol readings are shown on a large illuminated display. Four indicator lights inform instruct the operator. Pass/Fail display upon request.
- **CONFIGURATION:** operating parameters may be set meet the user's needs.
- **INTEGRAL PRINTER:** delivers a comprehensive test record – with alcohol readings, test number, serial number, date and times, Names, signatures and the location are then entered by hand. The printout is available in various languages: customization on request.
- **LAST TEST RECALL:** the result of the last breath test can be recalled and reprinted, even if the instrument has since been switched off.
- **SHOULDER-BAG OR CARRY-CASE:** the 400 comes housed in a soft water-resistant shoulder bag as standard. However, a hard, water-proof carry-case (fitted to carry an **AlcoCal**® alcohol standard) is also available as an alternative option.
- **AUTOMATIC DATA COLLECTION:** alcohol readings are stored in memory, with date and time. This data can then be downloaded to a printer or PC
- **CALIBRATION SECURITY:** by means of a 'dongle' electronic key.
- **APPROVALS:** Approved by law enforcement authorities worldwide, for *evidential* testing.

# Simple Operating Procedure!



1 ONE BUTTON SWITCH ON  
SELF CHECK  
ATTACH MOUTHPIECE



2 INSTRUCT THE SUBJECT  
BREATH SAMPLE PROVIDED



3 NOTE ALCOHOL READING



4 OBTAIN PRINTOUT

## Specifications and Features

- **Fuel Cell Sensor:** high specification to alcohol, unaffected by other possible breath contaminants
- **Warm-up Time:** the instrument is ready for use within 15 seconds of switch on, at *any* temperature.
- **Measuring Range:** normally 0.00 to 2.00 mg/litre BrAC or 0 – 400 mg% BAC.
- **Breath Sampling System:** deep lung breath sampling or passive sampling.
- **Analytical Response Time:** normally within 30 seconds; but within 5 seconds at zero alcohol levels.
- **Analytical Precision & Accuracy:**  $\pm 0.01$  mg/litre BrAC or  $\pm 2$  mg% BAC
- **Display:** four digit, illuminated LCD
- **Alcohol Unit:** Blood Alcohol (BAC); mg/100ml (mg%)
- **Date and Time:** each test result is stored with date and time [internal battery backed].
- **Memory Capacity:** 500 tests as standard, expandable up to 5,000.
- **Audible indicator:** beeper signals fault conditions and changes in instrument status.
- **Instrument Status:** four light emitting diodes indicate current status.
- **Communication:** RS-232 serial interface to printer or personal computer for test data transfer.
- **Memory Function:** stores more than 500 test results including date and time, reprints last breath test and store test can be download to optional printer or PC
- **Recalibration:** at least every six months, using either a wet-bath simulator or **AlcoCal**<sup>®</sup> gas standard.
- **Recovery Times:** typically 10 seconds at zero alcohol; 60 seconds at 0.35 mg/litre BrAC; 4 minutes at 2.00 mg/litre BrAC.
- **Temperature Range:** from 5°C to +40°C for optimum operation.
- **Power Supply:** 5 AA alkaline batteries give at least 3,000 breath tests.
- **Radio Frequency Immunity:** exceeds requirement of EN 50082-1.
- **Shock/Vibration:** impact resistant ABS: meets IEC 68-2-27 Part 2.1 Test EA and IEC 68-2-6 Part 2.1 Test FC.
- **Dimensions and Weight:** 80mm(w) x 39mm(d) x 169mm(h) instrument only; approximately 525 grams.
- **Optional Accessories:** printer, carrying bag, printer cable, PC link cable or plastic case.

## Accessory Items

- **Disposable Mouthpiece:** low resistance to breath flow; individually and hygienically wrapped.
- **Reusable Sampling Cup:** an alternative to the mouthpiece, for rapid subject sampling and turnover, such as at a Police roadblock or factory gate.
- **Handbook:** a range of handbooks covering all aspects of use of the instrument and accessories

## Accessory PC Software

- **Data-400<sup>™</sup>:** retrieve test data from the instrument's memory and store it on your PC's hard disk; then export to any standard database or spreadsheet program. Operates under MS Windows.

*Supplied with connector cable and full instruments.*



Lion Laboratories Limited

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