



DDS-AR User Handbook

Revision 2.0



Drug Detection Solutions

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Suitable for zero-tolerance environments, the ALCORapid® alcohol screening analyser utilises a rapid, non-contact (passive) method of detecting the presence of Ethyl Alcohol from a valid breath sample.

It does not display a numerical value / quantity of alcohol detected, rather a simple 'Positive' is displayed for readings > 0.005% BAC, and 'Negative' for readings < 0.005% BAC .

The **ALCORapid**® instrument also features a powerful flashlight and luminous traffic control baton for traffic control applications.

Instrument Overview



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RETAIN FOR FUTURE USE	

Read the instruction manual carefully before using this device, especially the safety instructions, and keep the instruction manual for future use.

Should the device be provided to another person for use, it is vital that these instructions are read prior to use.

Explanation of symbols

The user handbook that belongs to this device contains important information about starting up and operation. Read the User Handbook thoroughly. Non-observance of these instructions can result in serious injury or damage to the device.

WARNING

These warning notes must be observed to prevent any injury to the user.

**CAUTION**

These notes must be observed to prevent any damage to the device.

**CAUTION**

These notes give you useful additional information on the installation and or operation.

**1 SAFETY INFORMATION**

- † Only use the device for the specific purpose described in the user manual. Any misuse will void the warranty
- † The device is not designed to be used by persons (including children) with limited physical, sensory or mental abilities, or by persons with insufficient experience and or knowledge, unless under observation by a person responsible for their safety, or unless they have been instructed in the use of the device.
- † If a fault occurs or the device is damaged, do not attempt to repair the device yourself, as this will void the warranty. Contact your dealer and only have repairs carried out by authorised service partners.
- † Do not move the device away from in front of the subject until the sample is taken or else fresh air may be mixed with the sample taken and reduce the reading.
- † Do not let the subject blow smoke into the device.
- † Do not hold the device at an angle when the subject is blowing a sample, hold it straight on.
- † Do not let the subject blow very hard into the device; this could damage the flow sensor.
- † Do not use the device if it is damaged
- † Do not dismantle the device, it contains parts which might be harmful if handled incorrectly.
- † Do not use the device in damp environments.
- † Do not immerse the device in water or other liquid, It is not watertight.

- † For cleaning, follow the instructions in 5.1 Cleaning and Maintenance.
- † Do not shake or tap the device.
- † Do not drop the device.
- † Protect the device from direct sunlight, extremely high or low temperatures, dirt and dust.

2 USEFUL INFORMATION

The **ALCORapid®** is a quality product by Drug Detection Solutions Pty Ltd (DDS).

To ensure best results and long term satisfaction with your **ALCORapid®** we recommend that you read the following operating and maintenance instructions carefully.

2.1 Items supplied and packaging

Please check the **ALCORapid®** is complete and not damaged in any way. If in doubt, do not use it and contact your nearest service centre.

The following items are included:

- † 1 x ALCORapid®
- † 1 x battery (not removable)
- † 1 x charging lead
- † 1 x mains power adapter
- † 1 x user manual
- † Carry case

If you notice transport damage during unpacking, please contact your dealer without delay.

2.2 Useful information on taking a breath sample with the ALCORapid®

When the subject blows into the sample cone, the flow rate is monitored against time. Once the minimum conditions for flow and time are satisfied (a minimum of 20-30L/min) a small sample of breath is taken from the sample cone and passed to the sensor.

2.3 Taking a breath sample reading – quickly and accurately

The **ALCORapid®** allows contact-free indication of alcohol in a breath sample. The sample is taken from a distance of 2.5cm, the person is required to blow straight into the sample cone at which point the sample strength indicator will begin to fill. The breath sample is analysed and the results of the test are displayed on the screen which is indicated by a 'Positive' or 'Negative' displayed on screen. This sampling method allows for its use where several people have to be tested quickly for the presence of alcohol.

3 OPERATION

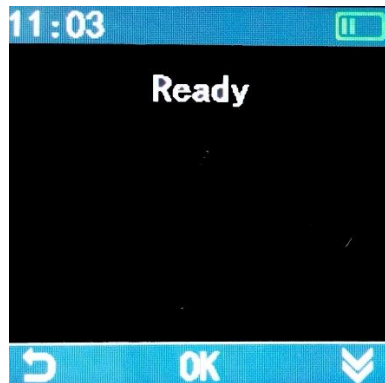


Figure 1. Ready for operation

3.1 Getting Started

Charging the instrument

Use the supplied USB cable to charge the instrument's rechargeable lithium battery. Recharge battery time is approximately 4 hours.

Pre-test Conditions

1. Operating temperature range is -5°C to 50°C. Use within this temperature range will limit condensation from a subject's breath and ensure an accurate reading from a breath sample.
2. Mouth alcohol generally takes 10 – 12 minutes to disperse, so it is recommended that the operator observe a subject for at least 20 minutes before administering the breath test to ensure that nothing is consumed or expelled from the mouth of the subject. This includes smoking, which should be avoided for at least 5 minutes prior to testing.
3. Blood alcohol concentration can continue to rise for up to 2 hours after the cessation of drinking. A subsequent test may be required if alcohol is detected or the result is close to the designated threshold.
4. It can take 10 hours or more for the blood alcohol level to return to zero after a high blood alcohol level has been reached. In such cases, further testing should be carried out later in the day or the following morning.
5. When supplying a breath sample, the flow rate should be in the range 20-30L/min
6. It should be noted that many foods and some 'non-alcoholic' drinks may still contain small traces of alcohol. The subject should also avoid drinking water as water will cool the mouth and dilute saliva, which may temporarily reduce breath alcohol levels.

Following these procedures will eliminate mouth alcohol from producing incorrect readings.

3.2 Switching On and Off

Switch On

Ensure the **Lock** function button (Rear of Unit) is turned off before attempting to turn on the device.

Press and hold the 'Alcohol Testing' button for two (2) seconds, release once the **ALCORapid®** powers on.



During Switch On the device will run a diagnostic check assuring functions operate correctly.

Switch Off

To switch off, press the 'Alcohol Testing' button for two (2) seconds at when "ready" is displayed.

Press the 'Flashlight Control' button several times to cycle through the various flashlight options; 'Top Torch', 'Bottom Torch', 'Top and Bottom Torch', 'Off'.

Press the 'Baton Control' button several times to cycle through the various baton options; 'Normal', 'Strobe', 'Off'.

Automatic Switch Off

The instrument will automatically switch Off after five (5) minutes.

3.3 Active Mode Testing

This mode requires the subject to blow **Actively** into the device. It is the most accurate method of operation.

1. Press 'Alcohol Test' Button for 2 seconds to turn **ALCORapid®** On
2. Wait for screen to display 'Ready'
3. Place **ALCORapid®** 2.5cm away from the subject's mouth
4. Instruct the subject to provide a strong and steady blow for at least 3 seconds, "Please wait" will be displayed whilst device is sampling.
5. The result will be displayed on the screen 'Positive' or 'Negative'.
6. Press 'Alcohol Test' button to conduct another test then follow procedure from Step 2 above
7. Hold the 'Alcohol Test' button for two seconds to turn **ALCORapid®** OFF

3.4 Passive Mode Testing

This mode enables a test to be conducted where the subject is unable to blow into the device

1. Press 'Alcohol Test' Button for 2 seconds to turn **ALCORapid®** On
2. Wait for screen to display "Ready"
3. Place **ALCORapid®** 2.5cm away from the subject's mouth
4. Press 'Alcohol Test' button for 1 second to take a sample
5. The result will be displayed on the screen 'Positive' or 'Negative'
6. Press 'Alcohol Test' button to conduct another test then follow procedure from Step 2 above.

7. Hold the 'Alcohol Test' button for two seconds to turn **ALCORapid®** OFF

NOTE

When the device is in regular use, particularly at low ambient temperatures, it is advisable to use a paper tissue to clean any breath condensates from the nose of the **ALCORapid®**

4. INTERPRETING THE RESULTS

Whether conducting a test using either Active (3.3) or Passive (3.4) modes, the result can be interpreted as follows:

- 'Positive' indicates > 0.005% BAC (Blood Alcohol Concentration) detected
- 'Negative' indicates <0.005% BAC (Blood Alcohol Concentration) detected

5 MISCELLANEOUS

5.1 Cleaning & Maintenance

- Do not immerse the device in water or other liquids it is not watertight.
- Never use aggressive cleaning agents, thinners, benzene, isopropyl alcohol or coarse brushes
 - Do not use or store the device in an environment where the ambient temperature or humidity is too high or too low, in direct sunshine, in the vicinity of static electricity or in a dusty environment.
- If the device is used as described in these instructions, a 6-monthly service is recommended to ensure accuracy is maintained. This is in accordance with recommendations outlined in Australian Standard AS 3547-1997.

5.2 Storage

A carry case is included for storing the device and accessories for easy transport. When not in use, the device and accessories should be stored in this carry case to prevent damage. Storage temperature range is -30°C to 70°C. Incorrect storage of the device will shorten the lifespan of the fuel cell sensor.

5.3 Disposal

Do not throw away or dispose of in a landfill site. Return to your service centre. Consult your local authorities or service centre for disposal information.

5.4 Warranty

Please contact your dealer in case of a claim under the warranty. If you have to return the device, please enclose a copy of your invoice and state what the defect is.

6 CALIBRATION PERIOD

As per Australian Standard AS 3547-1997 recommendations, calibration is required every 6 months to ensure the electrochemical fuel cell is reading accurately. This calibration requirement is time based, not usage-based. This means that even if the device has only had infrequent use during the 6month period, calibration is still necessary.

To ensure accuracy of your instrument is maintained, please send your ALCORapid® to: **Drug Detection Solutions** 27 Hi-tech Court, Eight Mile Plains QLD 4113

7 TECHNICAL SPECIFICATIONS

This device is designed for domestic use, law enforcement, industrial/safety applications and medical applications. For commercial use a metrological inspection and service is carried out six monthly.

Sensor	fuel cell
Measuring Mode	Dual method: active or passive
Pumping mode	Continuous - can be stopped mid-test
Detection Range	0 – 0.02% %BAC
Sensitivity	0.0005 % BAC
Measuring Unit	% BAC
Display	30mm OLED colour display
Function Buttons	3 individual buttons; torch control, baton control and alcohol testing buttons
Accuracy	Under standard concentration 50mg/100mL %BAC: A. blowing distance 3cm: ± 0.005 % BAC B. blowing distance 6cm: ± 0.006 % BAC C. blowing distance 10cm: ± 0.010 % BAC
Testing Time	1 - 15 seconds
Operating Temperature	-5°C to 50°C
Storage Temperature	-30°C to 70°C
Atmospheric Pressure	600 - 1400 hPa
Battery	18500 Lithium Battery: 3.7V/1500mAh, >4000 tests
Weight	265g (including battery)
Dimensions	325mm x 45mm
Power Consumption	Alcohol testing <50mA; Torch / Baton on <600mA
Torch Function	Top, Bottom, Both.
Baton Function	Alert Red light, Flash Red light

Should you require any further information, please contact your nearest distributor, or send an email to info@DrugDetectionSolutions.com.au Visit www.DrugDetectionSolutions.com.au to view product brochures, videos, whitepapers, and more products available from the Drug Detection Solutions range.



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