



Australian Government
Department of Industry,
Science and Resources

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval
NMI 16/1/3

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use as legal measuring instruments has been granted in respect of the instruments herein described.

Dräger Model Alcotest 9510 AUS Portable Evidential Breath Analyser

submitted by Draeger Australia Pty Ltd
 (formerly Draeger Safety Pacific Pty Ltd)
 8 Acacia Place
 Notting Hill VIC 3168.

This Certificate does NOT grant approval for use for trade.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

Pattern approval testing was carried out in accordance with NMI R126, *Pattern approval specifications for evidential breath analysers*, dated July 2013.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	12/12/08
1	Pattern approved – certificate issued	9/03/10
2	Pattern amended (Table 1) & updated – certificate issued	13/09/12
3	Pattern reviewed & amended (Table 1) & updated – certificate issued	25/06/15
4	Pattern amended (submittor address & Table 1) – certificate issued	28/06/16
5	Pattern amended (Table 1 corrected) – certificate issued	4/08/16
6	Pattern amended (Table 1 corrected) – certificate issued	17/11/16

Document History (cont...)

Rev	Reason/Details	Date
7	Pattern amended (Table 1 corrected) – certificate issued	15/05/17
8	Variant 1 approved – certificate issued	20/07/17
9	Pattern amended (Table 1 corrected) & variant 2 approved & submittor legal entity changed – certificate issued	29/08/19
10	Variant 3 approved – certificate issued	23/06/21
11	Variant 3 amended (Table 2) – certificate issued	17/10/22
12	Table 2 amended (TASPOL error correction) – certificate issued	15/11/22
13	Table 2 amended (ACT error correction) – certificate issued	30/03/23
14	Table 2 amended (SAPOL added) – certificate issued	06/09/23
15	Pattern & variant 3 amended (Tables 1 & 2 WApol added) – certificate issued	18/09/23

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 16/1/3' and only by persons authorised by the submittor.

It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

Special

Instruments shall be calibrated at intervals not exceeding twelve (12) months.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 16/1/3

1. Description of Pattern

**approved on 12/12/08
amended on 29/08/19
amended on 18/09/23**

A Dräger model Alcotest 9510 AUS portable evidential breath analyser (Figure 1) used to automatically determine the mass concentration of alcohol (#) in exhaled breath for evidential purposes. The instrument is portable and may be used in any location. It is approved for the measurement of the grams of alcohol in 210 litres of exhaled breath, g/210L.

The model Alcotest 9510 AUS is fitted with a colour LCD touchscreen display/keyboard and an integral printer.

(#) For the purposes of this approval, all references to alcohol are taken to mean ethanol.

1.1 Field of Operation

The field of operation of the instrument is determined by the following characteristics:

- Measurement range 0 – 0.500 g/210 L
- Unit of measurement 0.001 g/210 L
- Ambient temperature range 0 – 40°C
- Power supply AC 110 – 240 V, 50 Hz
DC 12 V
- Storage temperature -10 – +70°C

1.2 Power Supply

Power supply may be either:

- Mains AC power (110 – 240 V AC, 50 Hz nominal); or.
- A stable DC supply (12 V nominal) or remote 12 V battery, e.g. car battery.

1.3 Display Check

A display check is initiated whenever the device is powered-up.

1.4 Interfaces

Instruments may be fitted with interfaces as follows:

- (a) Serial interfaces, e.g. two RS232 and three USB, for the connection of peripheral devices.
- (b) An Ethernet interface for data communication.
- (c) A modem interface for data communication.
- (d) A video port for an external monitor, screen or projector.
- (e) An IrDA port for an infrared wireless keyboard.
- (f) Any of the following keyboards may be connected to the pattern for convenient data entry:
 - a standard desktop keyboard;
 - a keyboard with magnetic strip reading equipment; or
 - an infrared wireless keyboard.

1.5 Software Versions and Configurations

(i) Instrument versions

Instruments for each region are identified by an instrument part number as listed in Table 1 below.

(ii) Software versions

For each region, instruments are fitted with Windows CE software and Dräger M16 measurement software as listed in Table 1 below.

(iii) Configuration

In addition to the above, for each region, instruments are fitted with configuration files as listed in Table 1 below, to meet the approval and local requirements.

The software and configuration versions are displayed by selecting 'Menu' and then 'About' on the touchscreen.

TABLE 1 – approved software versions, etc.

Region	Instrument Part Number	Software			
		WinCE	M16	Configuration	
VIC Police (2010)	8320869	Part Number	8320012	8320011	8320013
		Version	4.8.8	0.1	1.4
		Checksum	0xCBEF	0x767B	0x7CF6
VIC Police	8320869	Part Number	8320012	8320011	8320013
		Version	4.9.23	1.3	1.11
		Checksum	0x2421	0x2AB4	0x66D0
VIC Police	8320869	Part Number	8320012	8320011	8320013
		Version	4.9.24	1.3	1.11
		Checksum	0x88AA	0x2AB4	0x66D0
TASPOL (2016)	8320859	Part Number	8326076	8326077	8326075
		Version	1.1	1.0	1.1
		Checksum	0xDA86	0xCAF9	0x21C9/0x9D9D
TASPOL (2019)	8320859	Part Number	8326076	8326077	8326075
		Version	1.3	1.1	1.2
		Checksum	0xB141	0xF72C	0xCB8E/0x59BF
ACT Police (2015)	8320857	Part Number	8324790	8324797	8320014
		Version	1.0	1.1	1.3
		Checksum	0xE8DB	0x581B	0x2B2F/0xC824
ACTPOL (2019)	8320857	Part Number	8324790	8324797	8320014
		Version	1.2	1.2	1.4
		Checksum	0x1754	0xF350	0x350E/0x9AE9
NT Police (2016)	8320868	Part Number	8326097	8326096	8320019
		Version	1.0	1.0	1.1
		Checksum	0x17F5	0xF81E	0x51C1/0xFEAE6

WApol (2017)	8325636	Part Number	8327197	8327196	8327195
		Version	1.2	1.2	1.3
		Checksum	0x7658	0x8971	0xD89A/0x916D
WApol (2023)	8325636	Part Number	8327197	8327196	8327195
		Version	1.3	1.3	1.3
		Checksum	0x34A1	0x76FC	0xD89A
Industrial	8320877	Part Number	8320012	8320011	8320021
		Version	4.9.23	1.3	1.8
		Checksum	0x2421	0x2AB4	0xF2

1.6 Sealing Provision

Provision is made for sealing the calibration adjustment after each calibration, as follows:

- (a) Set the Verification ('Certification') Dates function to be not more than 12 months from the date of calibration.
- (b) Remove the 'Service Plug'.
- (c) A destructible adhesive label is then placed over the sealing plate to seal the calibration access port (Figure 2).

1.7 Certification Provision

Provision is made for the application of a certification mark.

1.8 Descriptive Markings

Instruments carry the following markings, on one or more nameplates:

Manufacturer's mark, or name written in full	Dräger Safety AG & Co. KGaA
Pattern approval mark for the indicator	NMI 16/1/3
Serial number of the instrument
Measurement range	0 – 0.500 g/210 L
Unit of measurement	0.001 g/210 L
Ambient temperature range	0 – 40°C
Power supply:	110 – 240 V AC, 50 Hz
	12 V DC
Calibration interval	1 year

2. Description of Variant 1 **approved on 20/07/17**

The Dräger model Alcotest 9510 AUS portable evidential breath analyser which is similar to the pattern but fitted with an additional inactive flow sensor and alternative colour LCD touchscreen display/keyboard using LED-backlighting.

3. Description of Variant 2 **approved on 29/08/19**

The Dräger model Alcotest 9510 AUS portable evidential breath analyser which is similar to the pattern but fitted with an alternative absolute pressure sensor.

4. Description of Variant 3 **approved on 23/06/21** **amended on 17/10/22** **amended on 15/11/22** **amended on 30/03/23** **amended on 06/09/23** **amended on 18/09/23**

The Dräger model Alcotest 9510 AUS portable evidential breath analyser which is similar to the pattern but fitted with alternative flash memory and without an IrDA port.

4.1 Software Versions and Configurations

Instruments for each region are identified by an instrument part number as listed in Table 2.

Instruments for each region are fitted with Windows CE 5.0 software, Dräger M16 measurement software and configuration files as listed in Table 2, to meet the approval and local requirements.

TABLE 2 – approved software versions, etc.

Region	Instrument Part Number	Software			
		WinCE	M16	Configuration	
NT Police (2021)	8320868	Part Number	8320120	8326096	8320019
		Version	1.0	1.0	1.1
		Checksum	0xD51F	0xF81E	0x51C1/0xFE6A
WApol (2022)	8325636	Part Number	8327193	8327196	8327195
		Version	1.2	1.2	1.3
		Checksum	0x9929	0x8971	0xD89A
WApol (2023)	8325636	Part Number	8327193	8327196	8327195
		Version	1.3	1.3	1.3
		Checksum	0x843A	0x76FC	0xD89A
ACT Police (2022)	8320857	Part Number	8324793	8324797	8320014
		Version	1.2	1.2	1.4
		Checksum	0x0561	0xF350	0x350E
TASPOL (2022)	8320859	Part Number	8326078	8326077	8326075
		Version	1.3	1.1	1.2
		Checksum	0xCF55	0xF72C	0xCB8E
VIC Police (2022)	8320869	Part Number	8320023	8320011	8320013
		Version	4.9.24	1.3	1.11
		Checksum	0x7A4B	0x2AB4	0xB513
Industrial (2022)	8320877	Part Number	8320023	8320011	8320021
		Version	4.9.24	1.3	1.8
		Checksum	0x7A4B	0x2AB4	0x857D
SAPOL Police (2023)	3729774	Part Number	8325407	8325408	8325406A
		Version	1.1	1.1	1.1
		Checksum	0xBFCE	0x1743	0xAF78

TEST PROCEDURE No 16/1/3

Instruments shall comply with the requirements of, and should be tested in accordance with any relevant tests specified in, document NMI R126, *Pattern approval specifications for evidential breath analysers*, dated July 2004.

In addition, check the software version numbers. The version numbers are displayed by selecting 'Menu' and then 'About' on the touchscreen.

Maximum Permissible Errors at Certification

The maximum permissible errors for evidential breath analysers are:

(i) at initial certification:

± 0.004 g/210 L for all mass concentrations of alcohol < 0.080 g/210 L;

$\pm 5\%$ of the measured concentration of alcohol for all mass concentrations of alcohol ≥ 0.080 and ≤ 0.400 g/210 L; and

$\pm 20\%$ of the measured concentration of alcohol for all mass concentrations of alcohol > 0.400 g/210 L.

(ii) in service:

± 0.006 g/210 L for all mass concentrations of alcohol < 0.080 g/210 L;

$\pm 8\%$ of the measured concentration of alcohol for all mass concentrations of alcohol ≥ 0.080 and ≤ 0.400 g/210 L; and

$\pm 30\%$ of the measured concentration of alcohol for all mass concentrations of alcohol > 0.400 g/210 L.

FIGURE 16/1/3 – 1



Dräger Model Alcotest 9510 AUS Portable Evidential Breath Analyser

FIGURE 16/1/3 – 2



Dräger Model Alcotest 9510 AUS – Typical Sealing of Sealing Plate

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