



**Australian Government**  
**National Measurement  
Institute**

Bradfield Road, West Lindfield NSW 2070

**Notification of Change**  
**Certificate of Approval No 16/1/150**  
**Change No 3**

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

The following changes are made to the approval documentation for the

Dräger Model Alcotest 7110 MKII Portable Evidential Breath Analyser

submitted by        Draeger Safety Pacific Pty Ltd  
                          Axxess Corporate Park  
                          Unit 99, 45 Gilby Road  
                          Mount Waverley    VIC    3149.

In Certificate of Approval No 16/1/150 dated 10 June 2009;

- (i) The 2<sup>nd</sup> paragraph of the **Special Condition of Approval** should be amended to read, in part (in which changes are shown in **bold** text):

“Until 31 **July 2012**, measurements may be ...”

(Note that this Condition was previously amended by Notification of Change No 2 dated 13 July 2010)

- (ii) The FILING ADVICE should be amended by adding the following:

“Notification of Change No 3 dated 13 October 2011”

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

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the bottom.



**Australian Government**

**National Measurement  
Institute**

Bradfield Road, West Lindfield NSW 2070

**Certificate of Approval**

**No 16/1/150**

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

This is to certify that an approval for use as a legal measuring instrument has been granted in respect of the

Dräger Model Alcotest 7110 MK II Portable Evidential Breath Analyser

submitted by        Draeger Safety Pacific Pty Ltd  
                          Axxess Corporate Park  
                          Unit 99, 45 Gilby Road  
                          Mount Waverley    VIC    3149.

Pattern approval testing was carried out in accordance with NSC 126, *Pattern approval specifications for evidential breath analysers*, dated July 2003.

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.

**CONDITIONS OF APPROVAL**

This approval does NOT permit the verification/certification of new instruments. It does not become subject to review.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 16/1/150' and only by persons authorised by the submittor.

This approval applies only to existing instruments; they may be verified/certified, and verified/certified again after repairs, at the discretion of the relevant verifying/certifying authority.

Instruments may be relocated and reinstalled but shall not be altered in any way other than to replace existing components with equivalent components.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

### Special Condition of Approval

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

Until 31 August 2010, measurements may be displayed in %BAC, using a conversion factor of 2100 to obtain %BAC from the g/210 litre reading.

#### DESCRIPTIVE ADVICE

**Pattern:** approved 10 April 2006

- A Dräger model Alcotest 7110 MK II portable evidential breath analyser.

**Variant:** approved 10 April 2006

1. Certain other models of the Alcotest 7110 series.

Technical Schedule No 16/1/150 describes the pattern and variant 1.

**Variant:** approved 9 June 2009

2. The model Alcotest 7110 MK V with certain alternative software versions as listed in Table 3.

Technical Schedule No 16/1/150 Variation No 1 describes variant 2.

#### FILING ADVICE

Certificate of Approval No 16/1/150 dated 18 September 2007 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 16/1/150 dated 10 June 2009

Technical Schedule No 16/1/150 dated 18 September 2007 (incl. Tables 1 & 2, and Test Procedure)

Technical Schedule No 16/1/150 Variation No 1 dated 10 June 2009 (incl. Table 3)

Figure 1 dated 18 September 2007

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



TECHNICAL SCHEDULE No 16/1/150

**Pattern:** Dräger Model Alcotest 7110 MK II Portable Evidential Breath Analyser

**Submittor:** Draeger Safety Pacific Pty Ltd  
Axxess Corporate Park  
Unit 99, 45 Gilby Road  
Mount Waverley VIC 3149

## 1. Description of Pattern

A Dräger model Alcotest 7110 MK II portable evidential breath analyser (Figure 1) used to 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 (\*).

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

(\*) Until 31 August 2010, measurements may be displayed in %BAC, using a conversion factor of 2100 to obtain %BAC from the g/210 litre reading.

NOTE: Refer to the Conditions of Approval given in the Certificate, in particular 'This approval does NOT permit the verification/certification of new instruments.'

### 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 to 40°C
- Power supply: AC 230 to 240 V, 50 Hz  
DC 12 V
- Storage temperature –10 to 70°C

### 1.2 Power Supply

Power supply may be either:

- mains AC power (230 – 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 power is applied.

#### 1.4 Interfaces

The instrument may be fitted with interfaces as follows:

- (a) Any of the following keyboards may be connected to the pattern for convenient data entry:
- a keyboard;
  - a keyboard with magnetic strip reading equipment; or
  - an infrared wireless keyboard.
- (b) An RS232 serial or parallel data interface for the connection of peripheral devices.

#### 1.5 Software Versions

Model MK II instruments are fitted with Dräger software type 8319300, in different versions as listed in Table 1 below, to meet state/territorial requirements.

The software version is displayed by pressing 'v' on the keyboard or via the service menu.

TABLE 1

<u>Software Number</u>	<u>Version</u>	<u>Region</u>
8319300	3.20	ACT
8319300	5.08s	NSW
8319300	5.01	NT
8319300	2.03	TAS
8319300	5.21	QLD
8319300	5.06S	SA
8319300	5.07L	SA
8319300	5.04s	WA
8319300	SV 3.05	Shipping
8319300	TW 5.00	Industrial-Tide Water
8319300	WORS 5.01	Industrial-Worsley Alumina
8319300	5.00	Industrial
8319300	5.01	Industrial

Software Versions Model MK II Instruments

## 1.6 Sealing Provision

Provision is made for sealing the calibration adjustment after each calibration, by one or more of the following:

- (a) The use of a security dongle to access software calibration functions.
- (b) The use of a lead seal to identify opening of the instrument.
- (c) The use of a tamper evident seal to identify opening of the instrument.
- (d) The use of a 'Service Keyboard' to access the system within the instrument.

## 1.7 Verification Provision

Provision is made for the application of a verification mark.

## 1.8 Markings and Notices

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

Manufacturer's mark, or name	Draeger Safety Pacific P/L
Pattern approval mark	NMI 16/1/150
Instrument name	(Alcotest 7110)
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 to 40°C
Power supply requirements:	230 to 240 V AC, 50 Hz
	12 V DC
Calibration interval	1 year

## 2. Description of Variant 1

Certain other models of the Alcotest 7110 series, as listed below, which are similar to the pattern

- Model Alcotest 7110 MK IV; and
- Model Alcotest 7110 MK V.

NOTE: Refer to the Conditions of Approval given in the Certificate, in particular 'This approval does NOT permit the verification/certification of new instruments.'

Model MK IV and MK V instruments are fitted with Dräger software type 8319300, in different versions as listed in Table 2 below, to meet state/territorial requirements.

The software version is displayed by pressing 'v' on the keyboard or via the service menu.

TABLE 2

<u>Instrument Model</u>	<u>Software Number</u>	<u>Version</u>	<u>Region</u>
MK IV	8319300	5.01	Industrial
	8319300	5.01ESSO	Industrial-ESSO
	8319300	5.01BHP	Industrial-BHP
MK V	8319300	3.17	ACT
	8319300	4.00	NT
	8319300	2.20	TAS
	8319300	1.25	QLD
	8319300	S1.09s	SA
	8319300	3.38	VIC
	8319300	2.24	WA
	8319300	2.06	Industrial

Software Versions Variants MK IV and MK V Instruments

TEST PROCEDURE

Instruments shall comply with the requirements of, and should be tested in accordance with any relevant tests specified in, document *NMI R 126, July 2004, Pattern approval specifications for evidential breath analysers*.

In addition, check the software version number.

**Maximum Permissible Errors**

The maximum permissible errors are specified in Schedule 12 of the *National Measurement Regulations 1999*.

TECHNICAL SCHEDULE No 16/1/150

VARIATION No 1

**Pattern:** Dräger Model Alcotest 7110 MK II Portable Evidential Breath Analyser

**Submittor:** Draeger Safety Pacific Pty Ltd  
Axxess Corporate Park  
Unit 99, 45 Gilby Road  
Mount Waverley VIC 3149

**1. Description of Variant 2**

The model Alcotest 7110 MK V instruments described in Variant 1, now fitted with certain alternative Dräger software versions as listed below.

**1.1 Software Versions**

Instruments are fitted with Dräger software type 8319300, in different codes/versions as listed in Table 3 below, to meet state/territorial requirements.

These software versions below are displayed by typing 'SW-VERS' (or 'v' on some instruments) on the keyboard, while the 'Checksum' (where applicable) as shown in [square brackets] is displayed by typing 'CHECKSUM'.

TABLE 3

Software Number	Code	Version [Checksum]	Region
8319300	C	1.00b [28480]	ACT
8319300	N	1.00 [n/a]	NSW
8319300	M	1.00 [n/a]	TAS
8319300	Q	1.00 [n/a]	QLD
8319300	S	2.04 [47831]	SA
8319300	T	1.04 [753]	NT
8319300	V	1.00 [25347]	VIC
8319300	W	1.04 [52924]	WA
8319300	D	1.01a [13822]	Industrial







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**Notification of Change**  
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**Change No 1**

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Dräger Model Alcotest 7110 MKII Portable Evidential Breath Analyser

submitted by        Draeger Safety Pacific Pty Ltd  
                          Axxess Corporate Park  
                          Unit 99, 45 Gilby Road  
                          Mount Waverley    VIC    3149.

1. In Certificate of Approval No 16/1/150 dated 18 September 2007, the FILING ADVICE should be amended by adding the following:  
“Notification of Change No 1 dated 10 March 2009”
2. In Technical Schedule No 16/1/150 dated 18 September 2007, Table 2 in clause 2. **Description of Variant 1** should be amended by changing the software version numbers (‘Version’) for the model MK V instruments given for the TAS and SA regions to now read:

Instrument Model	Software Number	Version	Region
MK V	8319300	<b>TAS 2.21</b>	TAS
	8319300	<b>SA 1.10</b>	SA”

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

A handwritten signature in black ink, appearing to be 'J. G. T.', written in a cursive style.



Australian Government

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Bradfield Road, West Lindfield NSW 2070

## Notification of Change Certificate of Approval No 16/1/150 Change No 2

Issued by the Chief Metrologist under Regulation 60  
of the  
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The following changes are made to the approval documentation for the

Dräger Model Alcotest 7110 MKII Portable Evidential Breath Analyser

submitted by        Draeger Safety Pacific Pty Ltd  
                          Axxess Corporate Park  
                          Unit 99, 45 Gilby Road  
                          Mount Waverley    VIC    3149.

1.     In Certificate of Approval No 16/1/150 dated 10 June 2009;
  - (i)    The 2<sup>nd</sup> paragraph of the **Special Condition of Approval** should be amended to read, in part (in which changes are shown in **bold** text):  
  
          “Until **31 December 2011**, measurements may be ...”
  - (ii)   The FILING ADVICE should be amended by adding the following:  
  
          “Notification of Change No 2 dated 13 July 2010”
2.     In Technical Schedule No 16/1/150 Variation No 1 dated 10 June 2009, TABLE 3 in clause **1.1 Software Versions** is replaced by the TABLE attached herein:

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

A handwritten signature in black ink, appearing to be 'M. J. ...', written over a horizontal line.

TABLE 3

Software Number	Code	Version [Checksum]	Region/Group
8319300	C	1.00 [28348]	ACT
8319300	C	1.00b [28480]	ACT
8319300	C	1.03 [54098]	ACT
8319300	C	1.00 [28348]	AFP
8319300	C	1.00b [28480]	AFP
8319300	C	1.03 [54098]	AFP
8319300	M	1.03 [14414]	TAS
8319300	S	2.03 [50993]	SA
8319300	S	2.04 [47831]	SA
8319300	T	1.00 [60101]	NT
8319300	T	1.01 [64270]	NT
8319300	T	1.03 [157]	NT
8319300	T	1.04 [753]	NT
8319300	T	1.05 [44979]	NT
8319300	V	1.00 [25347]	VIC
8319300	W	1.02 [46826]	WA
8319300	W	1.04 [52924]	WA
8319300	D	1.01 [42101]	Industrial
8319300	D	1.01a [13822]	Industrial
8319300	D	1.02 [62038]	Industrial

FIGURE 16/1/150 – 1



Dräger Model Alcotest 7110 MK II Portable Evidential Breath Analyser