



Australian Government

**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 15/1/3

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

This is to certify that an approval for use for trade has been granted in respect of the

Perten Instruments Model Inframatic IM9200 Grain Protein Measuring Instrument

submitted by Perten Instruments AB
Källängsvägen
SE-141 71 Segeltorp
SWEDEN.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade 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.

This approval has been granted with reference to document NMI M8, *Pattern Approval Specifications for Protein Measuring Instruments for Grain*, dated July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 May 2014, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 15/1/3' 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.

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

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

DESCRIPTIVE ADVICE

Pattern: approved 22 May 2009

- A Perten Instruments model Inframatic IM9200 measuring instrument used to determine the protein content of a whole grain sample of barley or wheat grain.

Technical Schedule No 15/1/3 describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 15/1/3 dated 25 May 2009
Technical Schedule No 15/1/3 dated 25 May 2009 (incl. Test
Procedure)
Figures 1 and 2 dated 25 May 2009

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.

TECHNICAL SCHEDULE No 15/1/3

Pattern: Perten Instruments Model Inframatic IM9200 Grain Protein Measuring Instrument

Submittor: Perten Instruments AB
Källängsvägen
SE-141 71 Segeltorp SWEDEN

1. Description of Pattern

The pattern is a Perten Instruments model Inframatic IM9200 measuring instrument (Figure 1) used to determine the protein content of a whole grain sample of barley or wheat.

1.1 Design

The model Inframatic IM9200 instrument automatically determines the protein content of a sample of grain, and displays the value in increments of 0.1%, by passing a filtered light beam through the sample and to a detector; the detected signal is amplified and processed by the internal computer. Results are displayed on the LCD screen and may also be printed by the in-built printer.

1.2 Optional Equipment

The pattern may be fitted with a Specific Weight Module and/or Small Sample Module. The optional modules are not approved for trade use.

1.3 Interfaces

Instruments may be fitted with interfaces as follows:

- (a) Serial interfaces, e.g. an RS232 and a USB, for the connection of peripheral devices.
- (b) A modem interface for data communication.
- (c) A PS/2 keyboard port for a keyboard or a barcode reader.
- (e) An SW port for a Specific Weight Module.

1.4 Descriptive Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Perten Instruments AB
Name or mark of manufacturer's agent
Pattern approval mark for the instrument	15/1/3
Model designation
Serial number of the instrument
Approved operating range to% protein
Scale interval%
Grain type
Temperature range	5°C / 40°C
Power supply	230 VAC, 50 Hz

1.5 Sealing Provision

Provision is made for sealing the calibration adjustments in the instrument as follows:

- (a) Set the Protect level for each product to HARDWARE in the product menu.
- (b) Set the Protect level for each calibration to HARDWARE in the calibration menu.
- (c) Exit HARDWARE protection level by restarting the instrument with the key switch turned on.
- (d) Apply sealing wires through sealing screws as shown in Figure 2a to seal the hardware lock switch and the instrument housing, or apply destructible adhesive labels over the joints and the accessing hole to the hardware lock switch in the instrument housing as shown in Figure 2b.

1.6 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

TEST PROCEDURE

Instruments tested for initial verification shall comply with the certificate of approval and technical schedule, and the maximum permissible errors for initial and subsequent verifications/certifications at the operating conditions in effect at the time of verification.

Instruments shall comply with the requirements of, and shall be tested in conjunction with any relevant tests in, the document NMI M8, *Pattern Approval Specifications for Protein Measuring Instruments for Grain*, dated July 2004.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors applied during a verification/certification test are:

- ±0.5% of the quantity of barley measured; and
- ±0.4% of the quantity of wheat measured.

Ensure that instruments are only being used within the special temperature limits stated elsewhere in this Technical Schedule.

The serial number of the measuring instrument shall be recorded at the time of any verification/certification.

FIGURE 15/1/3 – 1

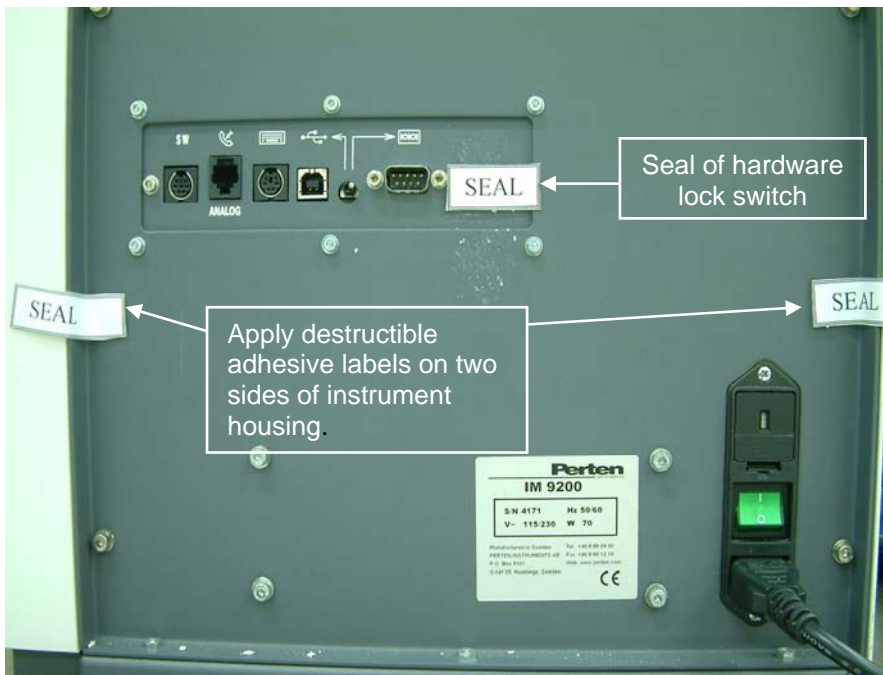


Perten Instruments Model Inframatic IM9200 Grain Protein Measuring Instrument

FIGURE 15/1/3 – 2



(a) Typical Sealing of Perten Inframatic IM9200 (lead and wire type seal)



(b) Typical Sealing of Perten Inframatic IM9200 (destructible adhesive labels)