AGRO-METROLOGIE

Independent laboratory for the maintenance and the calibration of measuring devices.

CERTIFICATE OF CALIBRATION N

Date of issue	
Calibrated device	DUROFEL DFT 100
Identification N	
Manufacturer	AGRO-TECHNOLOGIE
Year manufacturing.	

Customer :

Model:

Synthesis of the results: average of 3 measurements.
Checking precision and repeatability (reproducibility?).

Ref. daN	Reference Durofel	Value Read Moy.	Gap
0.13	10	10	0
0.21	20	20	0
0.28	30	30	0
0.36	40	40	0
0.43	50	50	0
0.51	60	60	0
0.58	70	70	0
0.66	80	80	0
0.73	90	90	0
0.80	99	99	0

Device certified by Roger Pelouzet

Checking the maximum repeatability error:
HIGHER dispersion;
Average of 5 measurements

	Ref	Value moy.
	daN	Measure daN
40 %	0.36	0.36
60 %	0.51	0.51
90 %	0.73	0.73

N	Ref	Tip
	mm	Measure mm
10	3,57	
25	5.64	
50	7.98	

Observation: the uncertainty of measure is of: ± one graduation of the device controlled (to see detail page 2 § 2) - Validity of the certificate: 12 months.

This certificate as well as the calibration of the device from which it ensues is certified in compliance with the specifications (see page 3) - This certificate

AGRO-METROLOGIE - Route de Maillane - 13103 Saint Etienne du Grès - France
Web site www.agro-metrologie.fr - e-mail contact@agro-metrologie.fr
Association régie par la loi du 1er juillet 1901 et par le décret du 16 août 1901
SIREN 443 651 872 - Récépissé de déclaration en préfecture N° 0132007503 – N° EORI FR44365187200014

1 - TERMS OF CALIBRATION
1.1 Reference
. Ambient temperature: 21 ° C ± 1 ° C
. ambient humidity: 50% RH ± 30% RH
. thermal stabilization time before the measures: 6:00

1.2 -Instruments used
. . A specific calibration bench with a micrometer Serial No: BM3010, calibrated on ……. by the LNE *, Certificate No. …… and a dynamometer Serial No: 061 546 calibrating the …… by the LNE *, certificate No. ……
. Callipers digital Serial No: 2J054342 calibrated on ……by the LNE *, Certificate No. ……

1.21 Reference document: Specification for calibration specific devices see page 3

1.3- Method of measurement
Calibration is performed by comparing the value-controlled machine's display to the value indicated by the display of the calibration bench.
It is performed for each 3 way control (measure the peak) at full scale to establish a correlation table.
The repeatability error is determined by making successive measurements 5 to 40% and 90% of the measuring range.

2 - MEASUREMENT UNCERTAINTY
Uncertainties mentioned are those corresponding to two standard deviations. Standard deviations were estimated taking into account the different sources of uncertainty, reference standards, calibration means, environmental conditions, contribution of the calibrated instrument repeatability.

The uncertainty of measure is of: ± one graduation of the device controlled
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3 - RESULTS The results are on page 1 and represent the synthesis steps described above

This report includes 3 pages.

*** LNE National Test Laboratory (accredited COFRAC 2.1446)**

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DETAILS FOR CALIBRATIONS

We perform calibrations and documents if attached, are both consistent guaranteed metrologically that administratively the specifications established in 1992 between the three following speakers:

- The expert:
Of the LNE (National Testing Laboratory) approved COFRAC under number 2.1446, headed by Mr. Fargier.

- The professional :
CTIFL (Technical Centre for Fruit and Vegetables) center of Saint Rémy de Provence (France) represented by Mr. Gérard Planton quality manager of fruits and vegetables

- The manufacturer :
AGRO-TECHNOLOGIE represented by Mr. Roger PELOUZET manager.

This approach was designed to precisely define the standards, conditions and tolerances for the calibration of mechanical and electronic devices using methods similar measure durofel and Pénéfel applied to fruits and vegetables.

The tester and associated instruments (recommended and described in this same specifications) are checked regularly by the LNE.

To ensure perfect operation of this set, an internal self-check is performed every week.

Sheet "QUALITY" we added, within the scope of our quality approach.

The red indication "**certified**" is affixed to the documents conforming recognized devices.

Note on the drafting of certificates:
The devices are certified compliant when their drift remains within the tolerances defined in the specifications for each type of device.
If this tolerance is exceeded, the devices are set to return results in tolerance and if this is not possible, the results are shown and in the worst case, the devices are labeled non-compliant.

Important note:
No one can pretend to establish a calibration certificate as if it did not undertake this step, which is for a new measuring method, applied to a particular area, to achieve a specification by the three parties concerned.

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