

# Legal Metrological Control



## What is legal metrological control?

Legal verification involves the mandatory inspection and verification of measuring instruments subject to metrological control to ensure their accuracy and compliance with applicable regulatory standards. [Applus+ Laboratories](#) is authorised to carry out legal verification of various instruments, ensuring that they comply with legal requirements.

## When and why is legal metrological control necessary?

Legal verification is necessary during the initial verification of new instruments prior to their commissioning, as well as in periodic verifications to ensure their continued operation within legal limits. In our case, the services we offer cover initial verification (Module F, F1 and G), periodic verification and verification after repair or modification. This process is essential not only for regulatory compliance, but also to protect consumer rights, ensure fairness in commercial transactions and maintain safety in various industrial and scientific applications.

## Types of Legal Metrological Verification

Applus+ Laboratories provides legal verification services for a wide range of instruments, classified by type of measurement and application.

### **Mass**

Automatic and non-automatic weighing instruments: We verify supermarket scales, pharmacy scales, weighbridges, automatic checkweighers, gravimetric instruments, discontinuous and continuous totalisers and railway scales.

- **F modules:** The applicable regulation is Directive 2014/32/EU of 26 February 2014.
- **Periodic verification or after repair of automatic and non-automatic weighing instruments:** The applicable regulation is Order ICT/155 of 7 February 2020. Verification must be carried out every two years and after each repair.

## Pressure

We verify the accuracy of pressure gauges used to measure the pressure of motor vehicle tyres, ensuring road safety and compliance with legal standards.

- **Periodic verification or after repair of electronic and analogue pressure gauges:** We carry out on-site verifications, guaranteeing that the indicated pressure is accurate. The applicable regulation is Order ICT/155 of 7 February 2020. Verification must be carried out every two years and after each repair.

## Gases and Optics

We verify exhaust gas analysers that measure vehicle emissions, ensuring that they comply with environmental regulations.

- **F modules:** Instruments to measure carbon monoxide and other gases emitted during combustion. The applicable regulation is Directive 2014/32/EU of 26 February 2014.
- **Periodic verification or after repair of exhaust gas analysers:** Instruments for measuring carbon monoxide and other gases emitted during combustion. The applicable regulation is Order ICT/155 of 7 February 2020. Verification must be carried out every year and after each repair.
- **Modules F:** Instruments that measure the opacity of diesel vehicle smoke. The applicable regulation is Order ICT/155 of 7 February 2020.
- **Periodic verification or after repair of opacimeters:** Devices that measure the opacity of diesel vehicle smoke. The applicable regulation is Order ICT/155 of 7 February 2020. Verification must be carried out every year and after each repair.

## Temperature

We verify temperature recorders and temperature probes used in refrigerated transport or at a specific temperature, ensuring the integrity of the cold chain and the appropriate temperature:

- **Module F:** of temperature recorders and thermometers, with integrated probe and external probe. The applicable regulation is Order ICT/155 of 7 February 2020.
- **Legal verification of temperature recorders and probes in refrigerated transport:** It is vital to maintain the cold chain in the transport of certain products. We verify

temperature recorders and probes used in the transport and storage of temperature-controlled products according to Order ICT/155/2020, and they must be verified every two years and after each repair.

- **Legal verification of temperature recorders and probes:** Used in the storage of products such as foodstuffs, medicines or biomedical products at controlled temperatures according to Order ICT/155/2020. Verification must be carried out every two years and after each repair.

## Volume

We verify instruments vital for the refuelling of the [transport industry](#) and for logistics, which ensure accurate measurements during refuelling and supply.

- **Periodic or post-repair verification of fuel dispensers:** Fuel dispensers must be verified to ensure accurate measurements during refuelling. The applicable regulation is Order ITC/155/2020, and the verification must be carried out every year or after each repair.
- **Periodic verification or after repair of adblue dispensers:** Adblue dispensers must be verified to ensure accurate measurements during refuelling. The applicable regulation is Order ITC/155/2020, and the verification must be carried out every year or after each repair.
- **Periodic or post-repair verification of vapour recovery systems (Stage II):** These systems are essential to control vapour emissions during refuelling. The applicable regulation is Royal Decree 455/2012, amended by Royal Decree 144/2016. Verification must be carried out annually and after each repair.
- **Periodic verification or after repair of metering systems intended for the supply of LPG liquefied petroleum gases for automotive vehicles, LPG dispensers or dispensers:** The applicable regulation is Order ITC/155/2020, and the verification must be carried out every two years or after each repair.
- **Periodic verification or after repair of instruments for multidimensional measurements:** These instruments are key in the transport and logistics sector to calculate the volume of products shipped. The applicable regulation is Order ITC /155/2020, and verification must be carried out every two years or after each repair.
- **Periodic verification or after repair of measuring equipment for tanker trucks:** Tanker trucks must ensure that the volume of liquid supplied through meters and measuring systems of these trucks. The applicable regulation is Order ITC/155 /2020, and the verification must be carried out every year or after each repair.

## Cinemometers

We verify sensor, optical (laser gun and laser barrier), Doppler effect and average speed cinemometers.

- **Module F:** The applicable regulation is Order ICT/155 of 7 February 2020.

- **Periodic verification or after** according to Order ICT/155/2020, and must be verified every year and after each repair.

## Ethylmeters

We verify instruments intended to measure the concentration of alcohol in exhaled air.

- **Module F:** The applicable regulation is Order ICT/155 of 7 February 2020.
- **Periodic verification or after** according to Order ICT/155/2020, and must be verified every year and after each repair.

## Acoustic equipment

We verify instruments intended for the measurement of audible sound and acoustic calibrators.

- **Module F:** The applicable regulation is Order ICT/155 of 7 February 2020.
- **Periodic verification or after** according to Order ICT/155/2020, and must be verified every year and after each repair.

## Refractometers

We verify refractometers for measuring sugar content in grape must, concentrated musts and rectified concentrates.

- **Periodic verification or after repair of refractometers:** The applicable regulation is Order ITC/155/2020, and verification must be carried out every year or after each repair.

## Recreational machines

We verify the counters of gaming and gambling machines to ensure compliance with legal requirements.

- **Periodic verification, after repair or modification, of type B and C gaming machine counters:** The design of the gaming machines must be in accordance with the authorised model and the ratio of prizes to games must be within the margins required by regulations. The applicable regulation is Order ICT/155/2020. The verification must be carried out every 4 years and after each repair.
- Technical inspection of gaming machines in the industrial area, according to the regulations of each Autonomous Community.

## Taximeters

We verify the fare calculation software in taximeters to ensure correct invoicing based on the distance and time of the journey.

- **Legal verification of taximeter fare calculation software:** Taximeters must verify their fare calculation software to ensure fare accuracy. The verification must be carried out at the commissioning of the taximeter model and when modifying fares. The applicable regulation is Order ICT/155/2020.

## How to certify measuring instruments under Legal Metrological Verification?

To certify instruments under legal verification, follow these steps:

1. **Select an Accredited Laboratory:** Choose Applus+ Laboratories, authorised for legal verification.
2. **Schedule the Verification:** Arrange an on-site visit or send the instruments to our laboratory.
3. **Verification Process:** Our inspectors perform rigorous testing to ensure compliance with legal regulations.
4. **Receive Verification Certificate:** A certificate is issued confirming the instrument's compliance with regulatory requirements.

## Benefits of Legal Metrological Control

Legal verification offers several benefits:

- **Compliance:** Ensures that instruments comply with legal and regulatory standards.
- **Accuracy:** Confirms the ability of instruments to provide accurate measurements.
- **Reliability:** Increases confidence in measurement data.
- **Safety:** Improves safety in critical applications such as tyre pressure and fuelling.
- **Consumer Protection:** Ensures fairness in commercial transactions involving measured quantities.

## Why choose Applus+ Laboratories for Legal Metrological Control?

Applus+ Laboratories offers distinctive advantages for legal verification services:

- **Accredited Experience:** Authorised by the Generalitat de Catalunya and other regulatory bodies.
- **Comprehensive Services:** Covers a wide range of instruments and applications.
- **On-site and Laboratory Services:** Flexible options to meet client needs.



- **Experienced Professionals:** Trained inspectors with extensive experience.
- **Quality Assurance:** Rigorous quality control and regulatory compliance.
- **National Coverage:** Multiple locations throughout Spain for a comprehensive service.