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# Legal Metrology and its link to the protection of consumers in Chile.

Training Courses in Legal Metrology

Ho Chi Minh, Vietnam.

September 07.

**Mauricio López Guzmán**

Sociologist, Methodology Expert - SERNAC  
(Government Consumer Protection Agency)



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## Self Introduction

- My name is Mauricio Lopez. I am a sociologist, I work at SERNAC (Government consumer protection agency)
- Our main objectives are: make the market transparent, foster consumers' rights, and defend consumers from illegal practices by negotiating with the companies and taking these cases to court if necessary.
- I have worked at the research department for 10 years, doing market research and nowadays I am responsible for leading investigations and in charge of the methodology used.
- Within an international context and rights of its citizens at SERNAC we are sure that by making the market transparent and encouraging consumers' rights we are contributing to better the competitiveness of the economy in Chile.



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## Non Automatic Weighing Instruments (NAWI) in the economy of Chile

- The national network of Metrology (RNM )regulates the norms of metrology in Chile.
- There are two main types of laboratories. The first type of laboratories are the (LCPN) guards and administrators that calibrate and protect the national patterns and evaluate the second type of laboratories. The latter responsible for measuring the industry and applying the norms.
- The main objective of this network is to achieve an international measurement comparability, which facilitates international trade such as free trade agreements.
- The Non Automatic weighing instruments apply the following magnitudes or areas: temperature, longitude, mass, force, pressure, electrical magnitudes, flow of liquid ,and chemistry.



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## Legal metrology system in Chile

- The government normalization agency (INN) created the network that conducts the laboratory guards and the unit of coordination and supervision.
- Its objective is to calibrate the national industry with international recognize standards, in order to facilitate international trade.



| Magnitude                    | Mass                                    | Temperature                              | Longitude (in millimeters)   |
|------------------------------|---|--|--|
| Range                        | 1 mg a 10 kg                            | -40 a 965 °c<br>(its-90) for comparators | 0,5-100 (short blocks);  |
| maximum measurement capacity | class e2 (oiml)                         | 0,0001 °c                                | 100-500 (long blocks); diameter 300 max.   |
| Range                        | 20 kg                                   |  | class 0 (short blocks ISO);  |
| Maximum measurement capacity | class f1 (oiml)                         |  | class 1 (long blocks ISO)  |
| Range                        | 50 kg                                   |  | ø 10 - 300; hmax 150;  |
| Maximum measurement capacity | Class f2 (oiml)                         |  | Roundness, Coaxial, concentric, cylindrical and straightness of axis. Roundness: 0,03 µm, cilindric: 1 µm/100 mm of height |
|                              |   |  |  |
| Magnitude                    | Pressure                                |  | Electrical variables   |
| Range                        | hidráulica: 0,5 a 140 mpa (p. Relative) |  | University of Concepcion, Chile  |
| maximum measurement capacity | 100 ppm                                 |  |  |
| Range                        | neumática: 0,0014 a 7 mpa (p. Absolute) |  |  |
| Maximum measurement capacity | 45 ppm                                  |  |  |
| Range                        | vacío: -3 a -100 kpa                    |  |  |
| Maximum measurement capacity | 200 ppm                                 |  |  |



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## Legal metrology system in Chile

### Laws and Agreements

- Decreto Supremo nº 775/1999 MINECOM- Masa y Temperatura.
- Decreto Supremo nº 487/2000 MINECOM- Fuerza.
- Decreto Supremo nº 096/2001 MINECOM- Longitud.
- Decreto Supremo nº 076/2003 MINECOM- Presión.
- Chile y la Convención del Metro.
- Chile y el Acuerdo de Reconocimiento Mutuo del CIPM

### Agreements

- Reconocimiento del Sistema Interamericano de Metrología, SIM.
- Centro Español de Metrología, CEM (España).
- Centro Nacional de Metrología, CENAM (México).
- Bureau de Normalization du Quebec, BNQ Canadá.
- Bureau National de Metrologié, BNM (Francia).
- Reconocimiento Mutuo con los laboratorios SURAMET (INTI-Argentina; INTN-Paraguay; INMETRO-Brasil; LATU-Uruguay, INN-Chile).
- Comité Internacional de Pesos y Medidas, CIPM



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## Legal metrology and consumers.

- If the process of production, especially within the food industry, does not apply international measurement patterns it causes an increase of price which is paid by the consumer.
- From the perspective of consumer rights, the measurements conducted without due traceability, lack credibility and have a negative impact on the price of the product.
- Within the context of the consumer rights we can find the right of credibility which means that a product should have, and weight what it stipulates on its labels. This principle can only be carry out with international standards.
- This is all possible if and only the measurement instruments are constantly verified and updated to continually improve our economy.



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## Situation in Chile about the compliance to the international standards

- The methodology used in Chile to apply international standards is: a group of experts, such as government representatives businessmen and consumers get together and agree on how to implement national and international standards.
- Explain current situation in your economy about the compliance to the international standards / recommendations, such as OIML R76? (I will get back to you on this on Friday)



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Are there any other requirements from your economy? Do you have any problems in order to implement the legal metrology system (budget, human resources, etc.)?

In order to execute and implement the requirements it is necessary to:

- Communicate benefits and achievements
- Have an impact of policies
- Provide adequate training to small and mid sized business



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