

FAQ

Published by: Adam Żeberkiewicz

Let us present to you the 10 most frequently asked questions (FAQ) which have been directed to the Central Office of Measures (GUM) over the last couple of years. The questions have been selected from the 100 requests published in the "Vademecum - the Polish administration of measures". We would like to encourage all readers interested in this topic to read the above mentioned guide in metrology services. The answers to the questions provide a synthesis, but not full explanations or interpretations of law. For this reason, please, treat the presented answers as a general information, not a binding interpretations of regulations. If you have any further questions, especially in individual cases, please, contact GUM or regional administration of measures.

1. What is the most important goal of the Central Office of Measures?

The most important goal of the Central Office of Measures is to ensure the measurement traceability in the areas of economy, science and social life. GUM plays the role of the National Metrology Institute, i.e. carries out measurements on such level which guarantees the highest level of trust in the measurement results and traceability of the national system of measures to the international one.

2. Are the Central Office of Measures and Regional and Local Offices of Measures accredited?

On 14 October 1999 the President of the Central Office of Measures signed the "Mutual recognition agreement of national measurement standards and of calibration and measurement certificates issued by national metrology institutes" (CIPM MRA). This agreement determinates the rules of recognition of measurement capabilities by the national metrology institutes (NMIs) which are responsible for maintenance of measurement traceability and, in particular, the national measurement standards.

Use of the mechanisms foreseen in the mentioned agreement guarantees that the services offered by NMIs have been checked carefully and are carried out on the declared level. Information on most of these measurement capabilities are included in

the CMC charts, i.e. in the annex C to the data base of the International Bureau of Weights and Measures (more details on).

By means of the common declaration from 23 January 2006 the BIPM, OIML and ILAC confirmed the importance of the CIPM MRA agreement within the international metrology system. It has also been reflected in the ILAC-P10: 2013 document "Policy on Traceability of Measurement Results" and included in the DA-06 document which has been issued by the) on "Policy on measurement traceability ensuring".

The calibration laboratory groups of the Regional Offices of Measures have been granted accreditation in the scope of their competences indicated on their own websites or on the website of PCA.

3. Why are there different systems of measurements, for example fots, meters, miles, kilometers and how are they related to each other? For example, how many kilometers are in one mile?

Judging from the content of the question, it is more about systems of units, not systems of measurement. These two concepts should be treated differently. In the past, there were different systems of measurement in use but now they have been replaced by the International System of Units (also known as "SI") almost in every country of the world. The only significant exception is United States where the implementation of the SI is still ongoing and the old units, the so called "Imperial and US Customary Units", are still in common use in the Anglo-Saxon households. The second eye-catching exception is use of fots and miles in the significant part of the international air and maritime transport. Here it can be assumed that the main obstacle is the complexity and cost of such big undertaking when "change for the SI moves too fast". It also could have a negative impact on the transport security level. Therefore, in this particular case, the transformation needs more time. The way, how to use the selected units from outside the SI in the international air and maritime transport has been specified in the relevant agreements and international documents. The units admitted from outside the SI have the status of "alternative" units. In principle the SI unit should be used in the air and maritime transport.

Converting from miles into kilometers can give different results depending on the type of mile which has to be converted.

4. Is it allowed to use other units than legal units of measurement?

The obligation to use the legal units of measurement applies to the usage of measuring instruments, performing measurements and indicating the physical quantities in situations defined by the relevant regulations. The measurement units other than the legal units can be applied on the basis of international agreements within maritime, air and rail transport.

In some cases, when the legal units of measurement have to be used, it is admissible to indicate additionally quantity values in measurement units other than legal units. The value indicated with the legal unit of measure is the key value. In particular, this value should be denoted with signs not smaller than signs informing about the value indicated with other unit of measurement.

Wherever the regulations require to indicate values in legal measurement units the application of units other than legal units is an offence and should be fined.

5. In which terms shall we give measurements of volume? In terms of cubic decimetres (dm^3) or liters (L)?

The liter is an unit of volume and capacity. It is indicated by "l" or "L". The current definition of the liter means $1 \text{ l} = 1 \text{ dm}^3$. The liter is the legal unit of measurement too. Both, the liter and dm^3 , can be applied for indication of the volume and capacity value.

6. What regulations define the requirements and calibration deadlines for measuring instruments?

According to the Law on measures the calibration of the measuring instruments is performed on the voluntary basis, remitted and carried out on request of the interested entity.

In some cases, according to the regulations, there is a need, for example in case of the verification points, to carry out calibrations or evaluations of the measuring instruments. According to the order on verification points the applicant should present the schedule of evaluations of the measuring instruments or measuring stands. Additional schedule of calibrations of the measuring instruments, which are part of the technical equipment, should be presented as well.

In case of application for the permission to run a digital tachograph service the order defines strictly the deadlines for calibration of the instruments which are part of the service technical equipment.

7. Is the type approval of the measuring instrument, which was produced in one of the Member States of the European Union, also valid in Poland?

According to the current law, the President of the Central Office of Measures can recognize by means of his decision the appropriate documents confirming the accomplishment of the legal metrology control of the measuring instrument carried out by the relevant foreign institutions in the European Union, EFTA countries and Turkey, which are members of the European Economic Area, as equal to the type approval and initial verification carried out in Poland. This is possible provided the

legal control, which is carried out by these institutions, will guarantee the measurement uniformity and accuracy on the level which at least complies with the detailed regulations defining requirements for the respective measuring instruments. Moreover, according to the article 2a of the Law on Measures the measuring instruments placed on the market or introduced for use in the European Union countries are also admitted to be used in Poland.

8. Who is responsible to initiate procedure of the legal metrological control of measuring instruments?

The manufacturer of the measuring instrument either its authorized representative or the importer have the responsibility to initiate the procedure of the legal metrological control in case of the initial verification or individual verification. In case of subsequent verification of the measuring instrument the user of the instrument or the service repairing the instrument have responsibility to initiate the legal metrological control of measuring instrument.

9. Where you can find information on verification validity period of measuring instruments which are subject to the obligatory legal control?

The verification validity periods of the respective types of measuring instruments have been specified in the Ordinance on legal metrology control of measuring instruments. The ordinance specifies how long is valid the verification of the respective measuring instruments, which kind of certificates and verification proofs are used i.a. how is this validity marked after verification of the measuring instrument.

10. How to count the verification validity period?

The method of counting the period of verification validity depends on the fact whether it is indicated in months or years. In case of indicating in years the period of validity starts with the first January of the year following after the year when the verification took place. If the period of validity is indicated in months then this period starts with the first day of this month when the verification has been accomplished.