

Metal and Quality LLC
Reference Material
Certificate of Chemical Analysis
CA09
Carbon Steel



APPLICABILITY

Reference material of carbon steel CA09 is intended for calibration of analytical instruments based on inert gas fusion methods

MEAN VALUES OF LABORATORIES

Lab. No.	N mass fraction in %
1	0.0100
2	0.0100
3	0.0105
4	0.0106
5	0.0107
6	0.0112
M(M)	0.0105
s(M)	0.0005

M(M) - Mean of intralaboratory means

s(M) - Standard deviation of the mean values of laboratories

CERTIFIED (mass fraction in %)

Element	N
Certified	0.0105
Uncertainty C(95%)	0.0005

Indicative content of oxygen is about 0.03%

Uncertainty C(95%) estimated as the half-width confidence interval of Student's t-distribution, when n is the number of laboratory means

$$C(95\%) = \frac{t \cdot s(M)}{\sqrt{n}}$$

SPECIFICATION

Reference material made of carbon steel as prepared for analysis pins with protective coated diameter of 3.5 mm, weighing 0.5 g

TRACEABILITY

The characterization of material has been achieved by means interlaboratory experiment.

DELIVERY

Packing - 100 pins in glass bottle and Certificate

DATE OF ISSUE	March 2020
VALID	March 2030
SAFETY	RM CA09 and packing does not contain explosives and radioactive substances and substances which might influence health and the environment
NOTE	Reference material should be stored in a tightly closed bottle in a dry place. When the bottle is opened for analysis, it should be stoppered immediately after use. Samples extracted from the bottle using clean metallic tweezers and placed directly into a carefully cleaned weigher and boat devices of analyzer

PARTICIPATING LABORATORIES

Asovstal Iron & Steel Works, Ukraine
Dneprospetsstal (DSS) PJSC, Ukraine
Energomashspetsstal (EMSS) OJSC, Ukraine
E.O. Paton Electric Welding Institute, Ukraine
Institute for Ferrous Metallurgy (IMZ), Poland
Metpromservis LLC, Ukraine

THE METHODS USED

Inert gas fusion with thermal conductivity

CONTACTS

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