

Metal and Quality, LLC
CERTIFICATE OF ANALYSIS
RM PX01
Manganese Ore



APPLICABILITY

RM PX01 is intended for calibration of analytical instruments at definition of chemical composition manganese ore

MEAN VALUES OF LABORATORIES

Lab. No.	Mn	Fe	SiO ₂	CaO	MgO	Al ₂ O ₃	P	S	MnO ₂	BaO	K ₂ O	Na ₂ O	LOI
1	47.21	1.64	12.38	1.75	1.04	1.50	0.310	0.026	50.50	0.29	1.33	0.42	13.01
2	46.60	1.68	9.56	1.60	1.02	1.46	0.288	-	52.45	-	1.17	0.47	13.31
3	46.10	-	12.36	-	-	-	0.290	-	-	-	-	-	-
4	47.16	1.61	-	1.85	1.15	1.48	0.239	-	50.98	-	1.48	-	12.09
5	47.60	1.59	-	1.89	1.18	1.54	-	0.024	-	-	1.33	0.34	-
6	46.20	-	-	-	-	-	-	-	-	-	-	-	-
M(M)	46.81	1.63	11.43	1.77	1.10	1.50	0.28	0.025	51.31	0.29	1.33	0.41	12.80
s(M)	0.60	0.04	1.62	0.13	0.08	0.03	0.03	0.001	1.02	-	0.13	0.07	0.64

M(M) - Mean of intralaboratory means

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

LOI - Loss on ignition at 900 °C

CERTIFIED

Elements	Mn	Fe	SiO ₂	CaO	MgO	Al ₂ O ₃	P	S	MnO ₂	BaO	K ₂ O	Na ₂ O	LOI
Certified Value (Mass fraction in %)	46.8	1.63	11.4	1.77	1.10	1.50	0.28	0.025	51.3	(0.3)	1.33	0.41	12.8
Standard Deviation	0.6	0.04	1.6	0.13	0.08	0.03	0.03	0.001	1.0	-	0.13	0.07	0.6

CERTIFICATE VALIDITY

December 2031

SPECIFICATION

RM is made as a powder fraction less than 63 micron

DELIVERY

RM in glass (100 g), packed into a box and the Certificate

STORAGE

The material should be kept in a dry room in the closed bottle

SAFETY

RM PX01 and packing does not contain explosives and radioactive substances and substances which might influence health and the environment

PARTICIPATING LABORATORIES (Ukraine)

Azovstal PJSC

Ilyich Iron and Steel Works of Mariupol PJSC

Dneprospetsstal PJSC

Zaporozh'ye Ferro Alloys Plant PJSC

Research and Design Titanium Institute SE

Ordzhonikidze Ore Mining and Processing Combine PJSC

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