

## VERIFICATION WAS PERFORMED

### using standard samples:

State standard samples of composition of aluminum, № on the State Register 10462-2014 (set VSA4).

### at the following values the influencing factors:

The temperature – 296,0 K

Relative humidity – 48%

Atmospheric pressure – 96,2 kPa

Supply voltage – (220±5) V

### Visual inspection.

Emission Spectrometer "SPAS-02", № 131 complies technical documentation (TY 4434-003-54296209-07 and Operating instructions ЦИА.002.00.000.06 PЭ), defects are absent.

### Testing.

Testing. The device is functioning properly, - according to the requirements TY 4434-003-54296209-07.

### Metrological characteristics:

Metrological characteristic	The value of the metrological characteristics			
	Requirements of regulatory documents		The actual value of metrological characteristics	
Working spectral range, nm	174-449		174-449	
Spectral resolution (on line Fe 440,475 nm), nm	not more than 0,05		0,021	
Uncompensated drift for a set of control lines	not more than 0,05		0,017	
The divergence of two parallel definitions of a mass fraction of the defined elements characterizing an indicator of convergence of parallel definitions (in unit shares) in accordance with GOST 3221-85	not more			
	Fe – 0,007	Ti – 0,0007	Fe – 0,0015	Ti – 0,00015
	Si – 0,007	V – 0,0007	Si – 0,0036	V – 0,00069
	Cu – 0,002	Cr – 0,0002	Cu – 0,0018	Cr – 0,00017
	Mg – 0,0007	Zn – 0,001	Mg – 0,0004	Zn – 0,00051
	Mn – 0,001	Na – 0,0005	Mn – 0,00005	Na – 0,00012
Divergence between results of the analysis and the content of elements in the state standard sample (in unit shares) in accordance with GOST 3221-85	not more than			
	Fe – 0,007	Ti – 0,0007	Fe – 0,004	Ti – 0,00026
	Si – 0,007	V – 0,0007	Si – 0,001	V – 0,0004
	Cu – 0,002	Cr – 0,0002	Cu – 0,0003	Cr – 0,00006
	Mg – 0,0007	Zn – 0,001	Mg – 0,0005	Zn – 0,0001
	Mn – 0,001	Na – 0,0005	Mn – 0,00003	Na – 0,00005

**The conclusion:** Metrological characteristics of Emission Spectrometer "SPAS-02", № 131, don't exceed the limits, normalized in the technical documentation (TY 4434-003-54296209-07 and Operating instructions ЦИА.002.00.000.06 PЭ) and comply with the requirements the authorized Technique of Verification МII-242-0418-2006, GOST 3221-85 with change No. 1 of 01.03.1991.

Verificator

Meshalkin M.A.

December 17, 2014.