

**QUALITY CERTIFICATE № 735-K**dated 31.07. 2013.

Liquefied natural fuel gas according to TU 51-03-03-85

Natural gas analysis according to GOST 31371.7-2008

Organization-supplier: Jsc «CRYOGAS»

Consignment № K-06.13/1

LNG sample is picked out by the handheld sampler.

Temperature: 0 °C

*Component composition of liquefied natural gas (LNG) consignment:*

Name of the component	Vol. %	Mass. %	Mol. %
Carbon dioxide	0,1495	0,3956	0,1495
Oxygen	0,0082	0,0158	0,0082
Ethane	1,6444	2,9830	1,6538
Nitrogen	0,2326	0,3931	0,2322
Propane	0,4860	1,2929	0,4931
I-butane	0,0851	0,2984	0,0874
N-butane	0,0831	0,2914	0,0857
I-pentane	0,0164	0,0714	0,0171
N-pentane	0,0125	0,0544	0,0132
Neopentane	0,0014	0,0085	0,0015
N-hexane	0,0109	0,0567	0,0118
<b>Sum:</b>	<b>2,7296</b>	<b>5,8610</b>	<b>2,7535</b>

**Calculation according to GOST 31369-2008:**

Rate: 100

Air density: 1,2047

Estimated value of methane: **97,2704 Об %**, **94,1390 Масс. %**, **97,2465 Мол. %**Tabular information of methane: density – 0,6669 kg/m<sup>3</sup>, Condensability factor – 0,9981

Relative gas density with regard to the air: 0,5738

Wobbe number: the lowest 11577 kc/m<sup>3</sup>, the highest 12855 kc/m<sup>3</sup>.Calorific value: the lowest – 8769 kc/m<sup>3</sup>, the highest - 9738 kc/m<sup>3</sup>Gas density with regard to the standard conditions - 0,7417 kg/m<sup>3</sup>

Condensability factor with regard to the standard conditions: 0,9974

**Calculation according to ISO 6976-2005:**

(Temperature: 0 °C)

Calorific value the lowest – 36,717 MJ/m<sup>3</sup>, the highest – 40,771 MJ/m<sup>3</sup>

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