(5.1 %) dominate. Value of module A (SiO_2/Al_2O_3) is 2.01. Silicon module B (Al_2O_3/SiO_2) is about 0.50. Value of module C (CaO/MgO) is 2.96, module D (CaO/Fe_2O_3) – 0.38, module M ($Al_2O_3+SiO_2$)/($CaO+MgO+Fe_2O_3$) – 1.48, and module N ($CaO+MgO–Fe_2O_3$)/($CaO+MgO+Fe_2O_3$) is -0.35. Sulfur content (S_t^d) of the layer coal varies from 0.59 % to 5.29 % being 2.64 % on an average. Generally, the coal belongs to sulphur one. Mineral sulphur prevails (60.7 %). Organic sulphur content is 39.3 %. Prevailing share of mineral sulphur affects adversely coal dressing.

Volatile-matter content (V^{daf}, %) on the area is 40.8 % on an average. Laterally, the change behaviour is not identified. In ultimate composition of coal, average content of carbon (C^{daf}, %) is 72.9 %. Nitrogen and oxygen total ($N+O^{daf}$) on the layer area varies from 18.6 % to 24.3 % being 22.2 % on an average. Hydrogen content (H^{daf}, %) varies from 4.5 % to 5.7 % being 5.2 % on an average. The highest specific coal heat (Q_s^{daf}, mj/kg) varies from 26.9 to 31.7 mj/kg being 31.7 mj/kg on an average. The lowest specific coal heat (Q_i^r, mj/kg) varies from 29.1 to 31.0 mj/kg and mean value is 29.9 mj/kg. Calorific equivalent is 1.02. On an average value of reflection of vitrinite (R_o) being 0.49 %, the coal belongs to 03 metamorphism class. It is at O_3 metamorphism stage. On single values of the factor (R_o=0.50 %) the coal belongs to class 10 of I metamorphism stage.

CIS classification ranks layer $\mathbf{m_4^1}$ coal among pit coal, its code number is mainly 0404400. It belongs to gas coal grade (Д); its subgroup is vitrinite gas coal. According to State Standard of Ukraine, the coal is pit one; it belongs to Д grade. According to International Codification System, coal of $\mathbf{m_4^1}$ layer belong to average rank (pit coal) characterizing by following code – 04 0 02 0 40 13 26 30.

Conclusions. Generalization of materials concerning coal composition and quality gives ability to specify:

1. On its origin, the coal belongs to humolites coming from debris of higher plants. All-Union Geological Institute Classification ranks them among helitolite class, helite subclass; mainly, it is represented by lipoid-fusinite-helite type.

2. Each layer coal has insignificant alike carbonization stage.

3. Coal regeneration depending upon petrographic features of the coal and data of chemical-engineering properties differ.

4. In accordance with all current classifications (both home and the world), coal of m_4^1 layer belongs to pit one.

5. Taking into account petrogenetical and chemical-engineering properties of the coal, burning, deep thermal processing and gasification are the main areas of its use.