sition and aluminosilicate's modification conditions [10-18]. The hydro-dehydrogenating function is determined by three main factors: the chemical nature of the metal component of the catalyst, its specific surface area and process parameters – temperature, hydrogen pressure.

The purpose of this work is the synthesis of effective and stable composites based on mesoporous aluminosilicateand activated bentonite modified with nickel for the process of hydroisomerization of n-hexadecane.

EXPERIMENTAL PART

In this work, nickel-containing composite was synthesized usingAl-HMS type mesoporous aluminosilicate and bentonite from the Tagan deposit as the acidic part. Synthesis of mesostructured aluminosilicate was carried out according to the technique [19], based on the joint hydrolysis of $Si(OC_2H_5)_4$ and $Al(Oi\text{-}Pr)_3$ in an alkaline medium. Hexadecylamine was used as a template. In order to study the activity of the synthesized catalyst, n-hexadecane was used as a model compound,since it is a part of the diesel fraction.

The process of catalytic conversion of n-paraffin was carried out in a laboratory setup with a fixed-bed catalyst under hydrogen in the temperature range of 350-400 °C; feed rates were 1 h^{-1}, hydrogen/raw materials ratio equal to 1000 nm^3/m^3, hydrogen pressure in the reactor is of 3 MPa. Analysis of liquid products was carried out on the "Crystal 5000" chromatograph with linear programming of the temperature from 35 °C to 250 °C. "Crystal 5000" chromatograph is equipped with a DB-1 column 100 meters long, with a diameter of 0.25 mm, polymethylsiloxane is a liquid stationary phase. The carrier gas is helium.

Adsorption studies were carried out on N_2 adsorption isotherms at 77 K, which were measured on Micromeritics' (USA) ASAP-2400 installation after training the samples in vacuum at 1500 °C. These isotherms were used to calculate the total accesssible surface by the BET method, the total porosity $\sum V_{pores}$ with effective sizes up to 100-200 nm (according to the value of adsorption at a relative nitrogen pressure of ~ 0.99), the distribution of the volume of mesopores by characteristic sizes (according to the desorption curve of the isotherm using the BJHV, micropores volume $V_{micropores}$ and mesopores surface $S_{mesopores}$ remaining after micropores filling.

RESULTS AND DISCUSSION

The results on the study of the porous structure and specific surface area of Al-HMS mesoporous aluminosilicates with a Si/Al ratio of 20 are presented in figure and table 1.