**Porosity of the carbon samples**

**Autosorb**

**Owner: Merkel Alyona Date: 17.06.2014**

**Equipment**

Autosorb-1

**Materials and suppliers:**

**Materials:**

Activated carbon samples:

1. CRH-700'C (original) (made in Kazakhstan)
2. CRH-700'C+CH4N2O (made in Kazakhstan)
3. CRH-700'C NH3+O3 (made in Kazakhstan)

Table 1. Porosity of the carbon samples. Micropore volume (Vmicropore), average mesopore diameter (Dmesopore), mesopore volume (Vmesopore) and Specific surface area SDEF were calculated using Density functional theory (DFT); specific area were also calculated using Brunauer–Emmett–Teller equation.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Samples** | **DFT**  **Vmicropores (cc/g)** | **Dmesopore (nm)** | **Vmesopore (cc/g)** | **SDFT  (m2/g)** | **BET**  **SBET (m2/g)** |
| CRH-700'C | 0,336 | 5,29762 | 0,37535 | 1409,948 | 1274,431 |
| CRH-700'C+CH4N2O | 0,174 | 3,93250 | 0,31970 | 911,399 | 931,372 |
| CRH-700'C NH3+O3 | 0,330 | 4,87927 | 0,43812 | 1370,837 | 1271,726 |

***Fig.1 Pore size distribution of CRH-700'C (original) determined using nitrogen adsorption analysis calculated using DFT.***

***Fig.2 Pore size distribution of CRH-700'C+CH4N2O determined using nitrogen adsorption analysis calculated using DFT.***

***Fig.3*** ***Pore size distribution of CRH-700'C NH3+O3 determined using nitrogen adsorption analysis calculated using DFT.***











