**REPORT**

**EXERCISE 2**

**SURFACE PHENOMENA**

**NAME:** **GROUP:**

**DATE OF EXERCISE:**

**EXERCISE TOPIC:** Adsorption from solutions.

**OBJECTIVE OF THE EXERCISE:** Determination of the adsorption isotherm of acetic acid from an aqueous solution on activated carbon.

**1. Table 1 – Results obtained during the exercise.**  
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**2. Table 2 – Summary of calculated values**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **No.** | **Acid concentration before adsorption *cp*** | **Number of moles**  **before adsorption** | **Acid concentration after adsorption *cp*** | **Number of moles**  **after**  **adsorption** | **Difference in the number of moles** | **Adsorption of the acid *a*** |
| **1** |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |

Note: the adsorption of the acid *a* is the ratio of the difference in the number of moles to the mass of activated carbon

**Example calculations**

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**3. Graphs of the linear forms of the Freundlich isotherm (log a = f(log c)) and the Langmuir isotherm (c/a = f(c)).**

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**4. Calculation of the values of the constants in the isotherm equations determined from the linear equations of the Freundlich and Langmuir isotherms.**

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**5. Graphs of the Freundlich and Langmuir isotherms (a = f(c), values of a calculated based on the constants of both isotherms) along with an indication (R² coefficient) of which one is better suited to describe the adsorption of acid on activated carbon.**

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**6. Conclusions**

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