CALCULATION OF THE VOLUMETRIC MASS TRANSFER COEFFICENT IN A CLOSED SYSTEM WITH THREE COLUMNS IN SERIES

Erinda Piluri
General Directorate of Metrology, Tirana, **ALBANIA**
E-mail
erinda.piluri@dpm.gov.al

Dhurata Koraj
Department of Industrial Chemistry, Faculty of Natural Sciences/University of Tirana
ALBANIA
E-mail
dhurata.koraj@fshn.edu.al

Ilirjan Malollari
Department of Industrial Chemistry, Faculty of Natural Sciences/University of Tirana
ALBANIA
E-mail
ilirjan.malollari@fshn.edu.al

ABSTRACT

In this paper it is presented an analysis of a closed system that measures ethanol vapor concentration, in order to have a proper representation of the human body lungs. In addition to the theoretical evaluation by predicting the mass transfer coefficient, continuous measurements were made in the system to reach the experimental determination of the mass transfer coefficient. From the comparison of the predicted values with the measured values, it was concluded that our system of three bubble columns set in series, is able to efficiently perform a natural process that takes place in the human body.

Keywords: Mass transfer coefficent, bubble column, ethanol concetration.