**ESTABLISHING a Method for determination of effective diffusion coefficiente**

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***Abstract:*** The aim of this paper is to calculate the effective diffusion coefficient for typical masonry clay on the base of experimentally recorded drying curves. Two computer programs for calculation of diffusion coefficient, which are based on mathematical calculation of Fick's and Cranck's diffusion equations, were developed. First program did not include shrinkage effect during drying into the computation algorithm while the second one has included it. Results presented in this study have show that the values of effective diffusion coefficient determined by designed computer programs have similar values as literature available values of the same coefficient for different clays. The presented models witch include shrinkage effect corresponds with experimental data well.

***Key words:***drying, mathematical model, effective diffusion coefficient.