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室内拡散試験を選択及び設計するための理論と技術的判断基準
Theoretical and Technical Criteria for Selecting and Designing Laboratory Diffusion Tests

張 銘 [1*] ; 内田 真理子 [2] ; 吉川 美穂 [1]
ZHANG, Ming[1*] ; UCHIDA, Mariko[2] ; YOSHIKAWA, Miho[1]

[1] 産総研, [2] ケミカルグラウト（株）
[1]AIST, [2]Chemical Grouting Co., LTD.

Mass transport in geo-environments is primarily controlled by advection, dispersion and sorption if no chemical and/or bio-chemical reactions and chain decay are involved. When permeability is low and/or hydraulic gradient is extremely small, mass transport in a geological stratum such as a clay layer will be controlled by diffusion and sorption.

To properly select a test method, and to effectively perform a laboratory diffusion test, theoretical solutions to both through and in-diffusions are overviewed. Based on discussion of analytical technologies for different kinds of chemicals, such as contaminants and/or nutrients associated with bio-remediation of volatile organic compounds (VOCs), this presentation illustrates how to selection a test method, how to shorten required testing time, how to determine sampling interval and how to interpret experimental data.

キーワード: 室内拡散試験, 透過型拡散試験, 浸入型拡散試験, 理論解, 分析精度
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