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Optimal dynamic experimental design for estimation of microbial kinetic parameters

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Case study I

Dynamic experiment design and validation in predictive microbiology: Optimal estimation of two-parameter microbial growth kinetics as function of temperature

K. Bernaerts, R.D. Servaes, S. Kooyman, K.J. Versyck and J.F. Van Impe 2002.
Optimal temperature input design for estimation of the Ratkowsky Square Root model parameters: parameter accuracy and model validity restrictions.
International Journal of Food Microbiology, 73(2-3), 145-157

Case study II

Dynamic experiment design and validation in predictive microbiology: Optimal estimation of four-parameter microbial growth kinetics as function of temperature

E. Van Derlinden, K. Bernaerts and J.F. Van Impe 2007. Accurate estimation of cardinal temperature parameters of *Escherichia coli* from dynamic experiments: What can we gain from optimal dynamic experiment design? In: Nychas, G.-J.E., Taoukis, P., Koutsoumanis, K., Van Impe, J. and Geeraerd, A. (Eds.), 5th *International Conference Predictive Modelling in Foods - Conference Proceedings*, 185-188, Agricultural University of Athens, Athens (ISBN 978-960-89313-7-4)

Case study III

Dynamic experiment design and validation for bioprocess modelling: microbial growth kinetics as function of substrate concentration From theory to practice

A.M. Cappuyns, K. Bernaerts, I.Y. Smets, O. Ona, J. Vanderleyden, E. Prinsen and J.F. Van Impe 2007. Optimal fed batch experiment design for estimation of Monod kinetics of *Azospirillum brasilense*: from theory to practice. *Biotechnology Progress*, 23(5), 1074–1081

For more information or reprints of papers

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