

The Review of the Habilitation Thesis of M.Sc. Burkhard Horstkotte, Ph.D. titled

**" THE AUTOMATION TECHNIQUE LAB-IN-SYRINGE: DEVELOPMENTS AND APPLICATIONS".**

Presented habilitation thesis is based on the authorship and co-authorship of 28 papers published between 2012 and 2023, which reflect a description of the development of FT up to the current state of the field of LIS automation. The papers have been published in high quality international journals with Q1 in 25 cases and Q2 in 3 cases. The papers have garnered an extraordinary citation response and Dr. Horstkotte is either the first or corresponding author with a major contribution.

The habilitation thesis is clearly structured and provides an instructive overview of flow techniques in the theoretical part. It is highly appreciated that the habilitation thesis, as a collection of published scientific papers accompanied by a commentary, is presented in English. As a senior citizen of the EU, I am inclined to the opinion that English should be the language of first choice and the exclusive language in professional interaction, in order to avoid unnecessary discussions about the correctness of the use of the Czech equivalent, starting with undergraduate theses.

I would be interested in Dr. Horstkotte's view on the primary application of LIS in clinical diagnostics and what is his opinion on the prospects of FIA techniques, especially in conjunction with electrochemical detection for the evaluation of electroactive substances in food, drugs, urine and plasma or extractable antioxidants from leaves of herbs, bark and wood of trees?

In conclusion, I can say that the submitted habilitation thesis is of very high quality and that there is no doubt about the high professional level of the work presented in it. The publications have been peer-reviewed in respected journals with high IFs. I am convinced that Dr. Horstkotte has all the prerequisites for further professional growth and that his tenure as Associate Professor at the Department of Analytical Chemistry of the Faculty of Pharmacy will be an asset to the field, which has long been pursued at a high internationally recognized level. I recommend the submitted habilitation thesis for further proceedings and propose that Dr. Horstkotte be appointed as Associate Professor upon its successful completion.

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