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May 19, 2026

Review letter of PhD thesis for Zair Tairovich Ibraimov

I am providing a review letter for the PhD thesis of Zair Tairovich Ibraimov, the PhD candidate.

The thesis is entitled "Production of Biologically Active Substances under Supercritical Conditions".

The annotation provided to evaluate the work is clear and well-conceived and show the main aspects of the thesis work, the relevance of the research, its aims, its novelty, the results achieved. The PhD candidate investigated, both theoretically and experimentally, different interesting technologies: vacuum drying with CaCl_2 desiccant and SC-CO_2 extraction. Regarding the latter, he also addressed the evaluation of the solubility parameters of the essential oils in SC-CO_2 . The obtained results have both theoretical and practical relevance in the field of biological active substances extracted with SC-CO_2 .

The PhD candidate published an article in an ISI journal (Foods, IF=5.1), and he has three contributions (proceedings) at conferences.

During his PhD, the candidate spent a month and a half in the Biomass Lab under my responsibility at the University of Trento, Trento, Italy. During that time, he performed SC-CO_2 extraction tests using the apparatus available in my lab. He demonstrated good experimental capabilities and proposed solutions to overcome issues arising from lab activity, such as the difficulty in trapping the essential oils in the depressurization stage due to their very high volatility. He did well during that time, and I appreciated it.

Due to the extent of the research done during his PhD thesis and the seriousness of the candidate, I support him in pursuing a PhD degree and I can only give a very favourable opinion for him to be admitted to his PhD defence.


prof. Luca Fiori