



## **SUPERVISOR EVALUATION**

Diploma thesis

Thesis title: **Optimisation of spray dryer with nebulisation head**  
Author: **Bc. Matthew David Dimmock**  
Supervisor: **Skočilas Jan, doc., Ing., Ph.D.**  
Reviewer: **doc. Ing. Pavel Hoffman, CSc.**

Author elaborated diploma thesis within range of 153 pages, containing 69 figures, 20 tables and 3 appendixes. 61 literature sources were used for literature search.

The thesis deals with analysis and optimization of spray dryer with nebulization head. The pilot scale spray dryer were investigated. The analysis was performed by three methods. Mass and enthalpy balances were calculated of the dryer. Experiments were carried out focused on determination flow distribution. CFD analyses were also modelled. The dryer has two geometrical configuration. Both were investigated.

The student's approach was very active and responsible. He worked mostly independently. His literature research related to nanopowders production is wide and concern state of art of production technologies. He performed analytical and numerical analysis on existing spray dryer. The results of the work were affected by the operational aspects of the dryer (non-functional sensors, etc.) and the COVID-19 pandemic, which broke out in 2020.

The author acquired a lot of experiences and knowledge in the field of spray dryers, experimental work, CFD simulations and the theory of nanopowders production.

Mr. Dimmock fulfilled all aims of the submission. I evaluated him by grade

**B (very good)**

In Prague, 17. 8. 2020