

## **Abstract**

The thesis presents a new method called Multiple Breath Washout (MBW) and its use in the assessment of breathing parameters in physiotherapy. The MBW evaluates respiratory parameters based on the washout of inert gas from the lungs and is applicable to all age categories. The theoretical part briefly summarizes the findings about the respiratory system and the types of functional lung examination, where spirometry is described and the larger part is devoted to less known method of Multiple Breath Washout.

In the practical part, a preliminary study is carried out on two patients diagnosed with cystic fibrosis. The patients were examined and measured before and after a thirty minutes physiotherapy. The effect was measured by both methods – spirometry and Multiple Breath Washout.

The aim of this thesis is to evaluate of short-term effect of physiotherapy on patients with chronic respiratory diseases.