

Abstract

The focus of this bachelor's thesis is the electrochemical degradation of abacavir. Abacavir is the active pharmaceutical ingredient of the medicine for human immunodeficiency virus (HIV). It was developed an electrochemical method for the oxidation of abacavir, including its excipients found in Ziagen tablets given to patients. Abacavir at a concentration of $0,15 \text{ mg}\cdot\text{cm}^{-3}$ was oxidized electrochemically at a constant potential (1,15V) on a specially assembled three-electrode apparatus. Subsequently, the quantity and type of the resulting products were analysed by a previously optimized chromatography method. The oxidation was relatively fast. After 7 minutes about 20 % of abacavir was oxidized. Two oxidation products were formed and their structures were confirmed by mass spectrometry.