

## **Abstract**

The purpose of this thesis was to determine the stability of doxorubicin and daunorubicin, both in the form of hydrochloride, in water, in a rabbit application solution (0.9% NaCl solution), and culture medium using HPLC with a fluorescence detector. Doxorubicin and daunorubicin belong to the group of anthracycline antibiotics used in the treatment of various types of cancer.

The stability of the substances has been investigated in water and 0.9% NaCl stored in glass and plastic (polypropylene) at room temperature in light and dark for 24 hours, in a refrigerator (8°C) for 3 months, in a freezer (-80°C) for 3 months, and repeatedly frozen (-80°C) and thawed (room temperature), totaling 3 times.

The stability of the substances in culture medium has been investigated in glass and plastics (polypropylene) at room temperature in light and dark for 3 days. Additionally, stock solutions were stored at 37°C in thermomixers protected from light in plastics (polypropylene) and in an incubator in glass and plastics (polypropylene and polystyrene) and examined for 3 days. They were also examined for their stability at repeated frozen (-80°C) and thawing (room temperature) of undiluted solutions and solutions diluted with 90% methanol.