

## Abstrakt

Silymarin is standardized extract isolated from fruits of Milk Thistle plant (*Silybum marianum*). The principal component of silymarin is silybin. This flavonolignan is mainly responsible for the medicinal effects of Milk Thistle fruits: antioxidant, hepatoprotective, anticancer and chemoprotective activities.

Natural silybin exists as an equimolar mixture of diastereomers A and B whose preparative separation is very hard. It was shown that the biological activity of silybin A and B are different. Silybin in the blood conjugates mainly to sulfates. The structure or biological activity of the sulfates is not yet known.

The aim of this work is to develop practically applicable method for preparative separation of diastereomers of silybin A and B, and sulfates, which are considered as one of the major metabolites of silybin.

The preparative method for separation of silybin A and B in the mobile phase consisting of 50% MeOH on the chromatographic column Labio C18 25x250 mm, was developed.

In addition, preparative method for separation of mixture of products accrued from the sulphation of silybin-23-acetate in the mobile phase consisting of MeOH/H<sub>2</sub>O 60/40 (v/v) with addition of 10 ml/l HCOOH, was optimized.