

**Conclusions.** The method of thin-layer chromatography found that leaves and rhizomes of *Iris hungarica* and 5 varieties of hybrid iris contain xanthonic glycoside – mangiferin. Iris raw material can be used as a source of xanthones, so the study of iris is perspective.

## THE COMPARISON OF SOLVENT SYSTEMS FOR QUALITATIVE ANALYSIS LIME FLORES OF *TILIA CORDATA* USING TLC

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**Introduction.** Family *Tiliaceae* is widespread tall deciduous. *Tilia cordata* is the most known species. Generally linden is used for treating influenza, cough, migraine, nervous tension and various types of spasm as it has a variety of properties such as a diuretic, diaphoretic, antispasmodic, expectorant, sedatives. Today linden is widely used in folk and officinal medicine. The officinal raw material is flowers (inflorescences) with flower buds (*Tiliae flos*), which are introduced into many pharmacopoeis of the world. The raw material contains essential oils, vitamins, mucilage and flavonoids. Nowadays there are only packed raw material and collections as medicines on the pharmaceutical market of Ukraine.

**Aim.** Development a method of TLC analysis of raw materials is expedient for identification and determination of its quality because of large variety of genus species. Therefore the major aim of study was selection a mobile phase for TLC analysis, which gives better resolution of linarin, routine and keampferol 3-O-glucosid-7-rhamnozide in extracts from the flowers of *Tilia cordata* as these compounds have quite close Rf.

**Materials and methods.** *Tilia flos* was used as a plant material for analysis, collected in Warsaw, Poland, in 2014, 2015, 2016. For determining the mobile phase of TLC analysis of extracts from *Tiliae flos* were used: tetrahydrofuran (POCH basis), isopropanol (POCH basis), dichloromethane (POCH basis), formic acid (Merck), acetic acid (Merck) and distilled water in different ratios.

The analysis was carried out at the Department of Pharmacognosy and Molecular Basis of Phytotherapy of Medical University of Warsaw. For analysis used: CAMAG Linomat 5, CAMAG ADC 2 Automatic Developing Chamber 2, CAMAG TLC plate heater III, CAMAG derivatizer, CAMAG TLC Visualizer 2; HPTLC plates, silica gel 60 F254, Merck. Standard samples of which were used for comparison: routine, keampferol 3-O-glucosid-7-rhamnozide, linarin.

**Results and discussion.** The analysis showed that Rf routine=0.29, Rf linarin=0.39, Rf keampferol 3-O-glucosid-7-rhamnozide=0.45 in mobile phase tetrahydrofuran – dichloromethane – formic acid – acetic acid – water P in a ratio of 9:9:4:4:2, accordingly. Using another solvent system isopropanol – dichloromethane – formic acid – acetic acid – water P in a ratio of 9:9:4:4:4, accordingly, Rf routine=0.73, Rf linarin=0.74, Rf keampferol 3-O-glucosid-7-rhamnozide=0.8.

More visible resolution of these compounds was provided by a mobile phase which contains tetrahydrofuran – dichloromethane – formic acid – acetic acid – water P in a ratio of 9:9:4:4:2, accordingly.

**Conclusions.** The identified solvent system will be used in the development of normative documentation for raw materials and extracts on its basis.