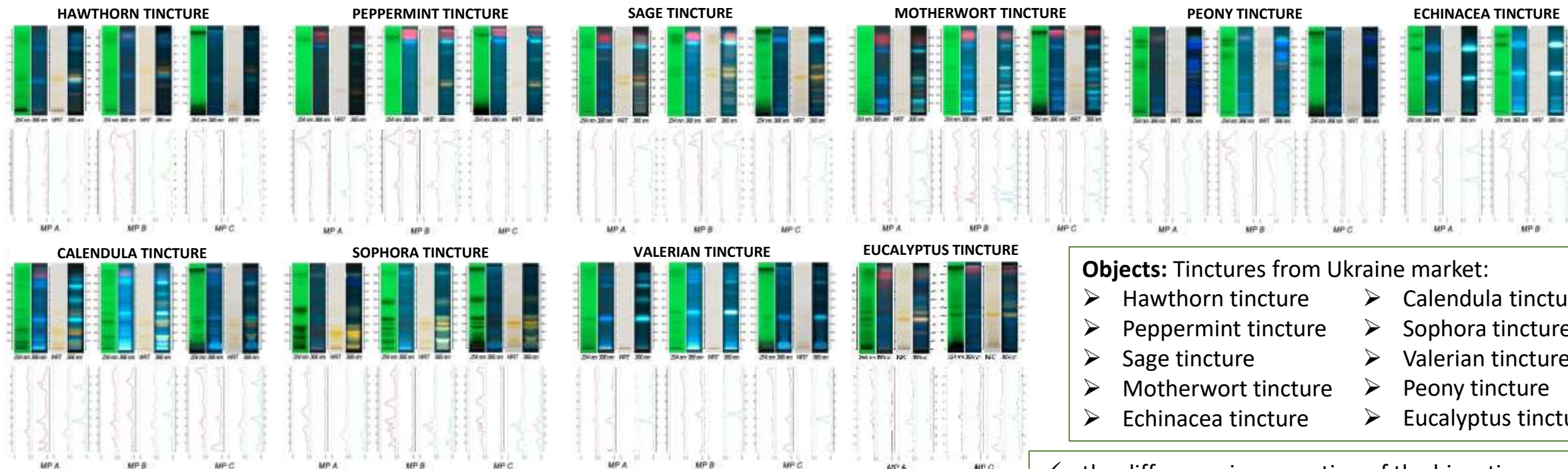


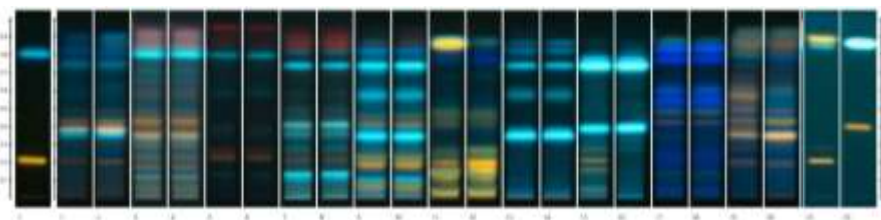
Development of Harmonized HPTLC Methods for Determination of Polyphenolic Compounds of Tinctures of Ukrainian Market

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MP A: Ethyl acetate – formic acid – water (8:1:1)
MP B: Ethyl acetate – formic acid – water – methyl ethyl ketone (5:1:1:3)
MP C: Ethyl acetate – formic acid – acetic acid – water (100:11:11:26)

Mobile Phase A is proposed for in-parallel HPTLC analysis of polyphenolic compounds of major analyzed tinctures



Objects: Tinctures from Ukraine market:

- Hawthorn tincture
- Peppermint tincture
- Sage tincture
- Motherwort tincture
- Echinacea tincture
- Calendula tincture
- Sophora tincture
- Valerian tincture
- Peony tincture
- Eucalyptus tincture

- ✓ the difference in separation of the bioactive substances of tinctures was determined;
- ✓ the characteristic marker substances of the tinctures were identified;
- ✓ the suitability of the mobile phase for individual analysis of the tincture or in-parallel analysis of different tinctures on the same plate were determined;
- ✓ the possibility of replacement one mobile phase by another was determined.

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The tincture is a traditional liquid dosage form for the pharmaceutical market of Ukraine. For the standardization of tinctures, polyphenolic substances are often used.

The purpose of the study was to identify and compare HPTLC chromatographic fingerprints (images of chromatograms and peak profiles from images) of flavonoids and phenylpropanoids of 10 tinctures of Ukrainian production in the harmonized mobile phases, to select for each tincture the specific marker zones, to determine the suitability of the specified chromatographic conditions for standardization of the tincture and the possibility to perform in these conditions the quality control for several different tinctures in-parallel.

The objects of the investigation were Hawthorn tincture, Peppermint tincture, Sage tincture, Motherwort tincture, Calendula tincture, Sophora tincture, Echinacea purpurea tincture, Valerian tincture, Peony tincture, Eucalyptus tincture. The research was carried out using the HPTLC method in the HPTLC automatic herbal system (CAMAG, Switzerland).

For each investigated tincture, the determination and comparison of HPTLC chromatographic fingerprints of flavonoids and phenylpropanoids obtained in different harmonized mobile phases were performed: the difference in separation of the bioactive substances was determined; the characteristic marker substances of the tinctures were identified; the suitability of the mobile phase for individual analysis of the tincture or in-parallel analysis of different tinctures on the same plate were determined; the possibility of replacement one mobile phase by another was determined.

The findings could be of special importance for the pharmaceutical manufacturers and quality control laboratories, which perform analysis on a large scale.

Speakers

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Parent Session

[Poster Session: Modern Chromatography - Method Development, Instrumentation, & Pharmaceutical Application](#)

