

RESEARCH OF SAFFLOWER FATLY OIL

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Promising source of new biological active compounds is Safflower (*Carthamus tinctorius* L.) - an annual plant with bright yellow flowers from the family Asteraceae, or Compositae. In Ukraine, safflower appeared in the XVIII century, and since the 30s of XX century, and agro-technical study of Safflower crops in numerous regions of Ukraine were made. There are well-known safflower varieties: "Sonyachnui", "Stepovui", "Givchik", "Lagidnui". Safflower flower and fatty oil produce wide range of pharmacological effect, such as analgesic, cholagogic, anti-inflammatory, hepatoprotective.

In some countries, flowers and oil seeds Safflower is Pharmacopeia's herbal drug and is used in folk and traditional medicine. In Ukraine there are no Pharmacopoeia requirements for quality of this herbal drug. Therefore, pharmacognostic study and development of Pharmacopoeia requirement for this new herbal drug of plant material is actual.

With the Soxhlet apparatus got fatty oils and determined its content, which amounted up to 20%. Safflower oil – transparent liquid with, light yellow color, has pleasant aromatic odor, and specific taste.

Fatty acid composition of the safflower oil determined using the method of chromatography-mass spectroscopy on chromatograph Agilent Technologies 6890 with mass spectroscopic detector 5973.

To sample material in 20 ml vial, was added internal standard - tridecane, at a rate of 50 micrograms per sample, and then calculate the concentration of the internal standard, which is then used for the calculation. To sample was added 10 ml distilled water and carried out water distillation during 2 hours using a reflux cooler. To identify components was used library mass spectra NIST05 WILEY and 2007 with a total of spectra > 470000 combined with programs of identify AMDIS i NIST. The quantitative calculation was performed using the method of internal standard.

Results of compounds composition show that safflower oil is characterized by a high content of unsaturated fatty acids. In the oil extract present as unsaturated and saturated fatty acids. The dominant on quantitative content is linoleic acid (> 78%), oleic acid (> 10%), palmitic acid (> 6%).

The Safflower oil is characterizes by high linoleic acid content and it is show protects of development of dietary supplements and drugs on the basis of this medicinal plant.