

# PHYTOCHEMICAL STUDY OF PURSLANE (PORTULACA OLERACEA. L)

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**Introduction.** Purslane is a common plant that grows on all continents and one of the most widespread weed in Ukraine. *Portulaca oleracea* is an annual succulent in the family of *Portulacaceae*. Purslane is rich in antioxidant vitamins  $\alpha$ -tocopherol, ascorbic acid, and  $\beta$ -carotene, as well as polyphenols and glutathione, and the amino acids isoleucine, leucine, lysine, methionine, cystine, phenylalanine, tyrosine, threonine, and valine. It possesses a number of pharmacological effects such as antidiabetic, antioxidant, neuronal and anti-inflammatory, immunomodulatory, organo- and neuroprotective activity.

**Aim.** Obtaining lipophilic and hydrophilic fractions of the *Portulaca* herb and studying the phytochemical composition.

**Materials and methods.** The object of the research was the herb of the *Portulaca oleracea* L., collected in the Kharkov region (Ukraine) in July, 2016. The herb was dried at a temperature 50-60°C and was crushed into powder by the plant pulverizer. Lipophilic fraction was obtained by exhaustive extraction with dichloromethane in a soxhlet extractor. The method of repeated extraction with 80% ethanol and hot water was used. After extraction, the solvent was distilled off under vacuum. Thin layer chromatography (TLC) and paper chromatography (PC) in various solvent systems were used for the detection of substances.

**Results and discussions.** The lipophilic, ethanolic and aqueous fractions were obtained in a yield of 3.8, 15.0, 17.5%, respectively. Using common methods of phytochemical analysis, coumarins, chlorophylls and carotenoids were found in the lipophilic fraction. Flavonoids and hydroxycinnamic acids were discovered in the ethanol extract by TLC in solvent system *n*-butanol-acetic acid-water (4:1:2). Free amino acids, hydroxycinnamic acids and polysaccharides were found in the aqueous extract. Monosaccharide composition of polysaccharides was studied by PC after hydrolysis of polysaccharides with 5% sulfuric acid in the *n*-butanol-pyridine-water solvent system (6:4:3). The chromatogram was sprayed with aniline-phthalate reagent and heated at 100°-105°C for 10 min. Glucose, galactose, mannose, xylose, arabinose and rhamnose were detected.

**Conclusions.** The results of phytochemical studies of the purslane herb fractions is required to their further standardization and pharmacological research.