

# DETERMINATION OF SUGAR ALCOHOLS AND MONOSACCHARIDES IN EXTRACT “PRUNOPHEN”

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**Introduction.** *Prunus domestica L.*, (fam. *Rosaceae*) is widely cultivated in Ukraine. A polysaccharide complex was isolated from plum fruits and the “Prunophen” liquid extract was obtained [1]. By our preliminary study chemical composition of obtained extracts was determined with TLC and qualitative reactions. A qualitative and quantitative study of organic acids was carried out [2]. The content of flavonoids and hydroxycinnamic acids was found with HPLC and among them such as: chlorogenic acid, rutin and quercetin [1].

The results of pharmacological studies of the liquid extract indicated diuretic, hypouricosemic, membranostabilizing effect and its positive effect on the rheological properties of blood [1].

The aim of our present study was determination of the content of sugar alcohols and monosaccharides in the extract “Prunophen”.

**Materials and methods.** The content of alcohols and free monosaccharides was studied by chromatography-mass spectrometry with gas chromatograph Agilent GC 7890 equipped with mass spectrometric detector Agilent MD 5975.

Compounds were identified by comparing retention times and Kovats retention index (RI) with standard substances and mass spectral data from database libraries Golm Metabolome (<http://csbdb.mpimp-golm.mpg.de/csbdb/gmd/gmd.html>) и NIST'08 (National Institute of Standards and Technology, USA).

**Results and Discussion.** In the extract “Prunophen” it was found in terms of dry weight (mg / 100mg): Glycerin -  $3.29 \pm 0.12$ ; Sorbitol -  $10.47 \pm 0.05$ ; Fructose -  $15.93 \pm 0.08$ ; Glucose -  $19.31 \pm 0.08$ . Sorbitol is used in medicine as a detoxification, diuretic, antispasmodic, laxative and choleric agent, a sugar substitute.

**Conclusions.** The obtained data showed promising further study of “Prunophen” and will be used for standardization and development of new drugs from *Prunus domestica* fruits.

## References:

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2. Mohammed S.B., Upyr T.V., Lenchyk L.V. Determination of carbon acids composition and content in the “Prunofit” and polysaccharide complex obtained from *Prunus domestica* fruits. *Topical issues of new drugs development: Materials of XXVI international scientific and practical conference of young scientists and students*, Kharkiv, April 10-12, 2019. Kharkiv: NUPh, 2019. P. 51.
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