

Analytical Chemistry 2018: Study of the lipids from the fruits of *Corylus avellana* L., growing in Georgia- Gorgaslidze N - Tbilisi State Medical University

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Under the common names of hazel or filbert are included the species belonging to the genus *Corylus*, tribe Coryleae, family Betulaceae. They are classified in the order Fagales, subclass Hamamelidae, class Magnoliopsida (Cronquist 1981). The genus currently includes some 15 species. The most interesting among them from the point of view of genetic improvement are: *Corylus avellana*, because of the characteristics of its fruits; *Corylus maxima*, because of its resistance to bud mites; *C. americana* and *C. colurna*, as they can resist low temperatures and diseases and *C. colurna* and *C. chinensis*, which may produce non-suckering rootstock (Romisondo 1976).

Hazel is a monoic species, generally 5 -7 m tall, although it may grow taller. Its buds are ovoid, obtuse; its leaves usually have fewer than eight pairs of veins. The male flowers have two bracteoles while the female inflorescence is short, bud-like and with red stigmas. The fruit is a large nut surrounded by a more or less tubular involucre which is dentate or lacinate above (Thtin 1964). Hazel is mainly known as a fruit tree, as its fruit has a pleasant taste and is highly nutritive. The fruits contain 63% fat (they produce high-quality edible oils but these easily go rancid) (Ruiz de la Torre 1979); 17,2% carbohydrates of which only 5.7% are assimilated; 14% protein and 5.7% water. They also contain vitamins A, B and C and a high level of inorganic compounds (Alvarez Requejo 1965).

The aim of this investigation was the study of lipids from the fruits of usual hazel-nut *Corylusavellana* L, growing in Georgia. Ripe fruits was collected in the West Georgia, just in Imereti. From the powdered fruits was obtained the sums of neutral and polar lipids. Qualitatively there were established classes entered in them. By using High performance liquid chromatography qualitatively and quantitatively were identified ten fatty acids, which time of deduction hesitate from 4,01 min

to 13,00 min. By the analyses there were determined unsaturated fatty acids C12:0 to C24:0. The content of unsaturated fatty acids considerably is distinguished from the content of the oil from the hazel-nut, growing in the other eco-geographical conditions. In the oil of the hazel-nut growing in Georgia content of hexadecanoic acid is by far exceeded (surpassed) than of the oil from the nut growing in the other natural conditions. In the other matters dominant acid is octadecanoic acid. The oil from the fruits of hazel-nut content physiologically active compounds, which desirably correlation is interesting not only for receiving (obtaining) cosmetic means, not is important for usage in practical medicine.

Biography

Gorgaslidze N has completed her PhD at the age of 37 years from Saint-Petersburg State Chemical-Pharmaceutical Academy, Russia. She is a director of TSMU Iovel Kutateladze Institute of Pharmacochimistry and professor at the department of Social and Clinical Pharmacy at Tbilisi State Medical University. She has published more than 100 papers in reputed journals, the author of 4 books and 2 patents. She is a member of organizing committee of several international conferences and meetings. She has more 40 years of teaching experience at the Tbilisi State Medical University, Georgia. She is founder of the Georgian Pharmaceutical Association (President 2002- 2005) and newspaper - "Pharmacy. She is member of scientist and young pharmacists of Georgia. Nana Gorgaslidze has long timework experience in the Ministry of Health, Labor and Social Affairs of Georgia in field of state control of quality medicinal and pharmaceutical products and other departments of the same ministry.

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