

ESSENTIAL OIL OF *Heracleum antasiaticum*

S. D. Ibadullaeva

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The cow parsnip *Heracleum antasiaticum* Manden. (Apiaceae L.) is a perennial plant growing 150 cm and more in height that is widely distributed in the Nakhchyvansk Autonomous Region of the Azerbaidzhan Republic [1, 2]. The content of essential oil in it has been reported [3]. However, the chemical composition of the oil has not been reported.

We studied the essential oil that was isolated by steam distillation [4] from the fruits and leaves of *H. antasiaticum* collected near Asia in Shakhbuzsk, Ordubadsk, and Dzhul'finsk regions when the fruit was fully ripe (Table 1).

The composition of the essential oil was determined by GLC on a Janaco chromatograph using a copper column (120×0.4 cm), PEG2000 (5%) stationary phase, column temperature programmed from 80 to 230°C at 8°C/min, flame-ionization detector at 250°C, and injector temperature 270°C. Pure compounds were added so that identification could be made on the basis of relative retention time and comparison with the literature. The component contents were calculated from the peak areas by internal normalization [5].

Essential oil obtained from ripe fruits that were collected in Dzhul'finsk region (Arafsa) of the Nakhchyvansk Autonomous Region was analyzed. It contained 16 components (%): camphene, 3.92; phellandrene, 0.30; limonene, 4.04; terpinolene, 10.75; hexylacetate, 2.80; hexylbutyrate, 21.50; ethylcaprylate, 29.80; octylacetate, 17.40; geranylacetate, 1.22; linalylacetate, 1.90; cineol, 0.36; *cis*-anethole, 3.00; methylchavicol, 0.90; eugenol, 1.04; and thymol, 0.47.

TABLE 1. Content and Physicochemical Constants of *H. antasiaticum* Essential Oil

Collection site	Plant organ	Essential oil content, %	$d_{20}^{20}$	$n_D^{20}$	Acid No.	Ester No.	Ester No. after acetylation
Shakhbuzsk	fruits	8.6	0.924	1.438	0.6	190.5	254.2
reg. (Kyu-Kyu)	leaves	0.17	0.911	1.401	1.3	179.8	228.9
Ordubadsk reg.	fruits	6.4	0.916	1.424	0.9	205.6	244.8
(Pezmeri)	leaves	0.13	0.861	1.438	1.5	182.3	254.2
Dzhul'finsk	fruits	4.8	0.877	1.514	1.2	278.9	324.5
reg. (Arafsa)	leaves	0.03	0.907	1.398	1.4	187.3	237.4

## REFERENCES

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Institute of Botany, Academy of Sciences of the Azerbaidzhan Republic, Baku. Translated from *Khimiya Prirodnikh Soedinenii*, No. 2, p. 173, March-April, 2000. Original article submitted November 15, 1999.