

## CHEMICAL COMPOSITION OF ESSENTIAL OIL FROM *Cercis griffithii* GROWING IN TAJIKISTAN

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*Cercis griffithii* Boiss. (Fabaceae) is a representative of the genus *Cercis*, numbers about 10 species [1], and is a beautiful decorative bush that bears nectar. One wild and one cultivated species grow in Tajikistan [2]. Flowers appear in early spring before leaves, have a pleasant sour taste, and are edible [3]. The chemical composition of essential oil from *C. griffithii* has not previously been studied.

*C. griffithii* was collected during flowering on Apr. 10, 2017, in the vicinity of Guli Bodom, Yavan District, Tajikistan, at elevation 850 m above sea level. The plant was identified by Dr. F. Sharopov (voucher specimen No. TJ 2017-11).

Herein, the chemical composition of essential oil obtained from dried flowers (100 g) of *C. griffithii* by steam distillation for 3 h using the standard method [1] is communicated. The yield of essential oil was 0.1% calculated for air-dried raw material. Essential oil was studied using gas-chromatography–mass-spectrometry (GC-MS) on an Agilent 7890A GC system with a 5975C inert XL EI/CI MSD using an HP-5ms column (30 m × 0.25 mm × 0.25 μm). The injected sample volume was 1 μL. The GC operating parameters were ionization energy 70 eV, initial temperature 60°C for 5 min and then to 280°C at 3°C/min, ion source temperature 230°C. Constituents were identified by comparing retention times determined using a homologous series of *n*-alkanes and by comparing their mass spectral fragmentations with mass spectra libraries and the literature [4]. Table 1 presents the GC-MS analytical results for *C. griffithii* essential oil.

TABLE 1. Constituent Contents in Essential Oil from *Cercis griffithii*, %

Constituent	RI*	%	Constituent	RI*	%
$\alpha$ -Pinene	940	8.4	<i>neo</i> -Isopulegol	1145	1.9
<i>p</i> -Cymene	1024	18.7	Menthone	1153	6.3
Limonene	1028	7.5	<i>iso</i> -Isopulegol	1156	4.0
1,8-Cineol	1030	16.6	Isoborneol	1163	3.1
$\gamma$ -Terpinene	1058	4.3	Methylchavichol	1198	5.3
<i>cis</i> -Linalool oxide (furanoid)	1071	0.8	Neral	1238	1.1
Fenchone	1087	2.0	Geranial	1266	1.5
Linalool	1099	9.8	Monoterpene hydrocarbons		20.1
$\alpha$ -Thujone	1105	5.5	Monoterpenoids		55.9
$\beta$ -Thujone	1116	0.6	Aromatic		24.0
Camphor	1144	2.8	Total unidentified		100.0

\*Retention index.

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A total of 18 constituents that constituted 100% of the total oil constituents were identified in the studied essential oil. The major constituents of *C. griffithii* essential oil were *p*-cymene (18.7%), 1,8-cineol (16.6%), linalool (9.8%),  $\alpha$ -pinene (8.4%), and limonene (7.5%).

## ACKNOWLEDGMENT

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