

ESSENTIAL OIL COMPOSITION OF *ACCA SELLOWIANA* (O. BERG.) BURRET.

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Abstract.

Essential oils of *Acca sellowiana* (O. Berg.) Burret was examined by GC and GC/MS. The main components for oil were, spathulenol (24.4%), δ -cadinene (9.6%), β -terpineol (8.7%) and β -caryophyllene (8.1%)

Key word index. *Acca sellowiana* (O. Berg.) Burret, Myrtaceae, essential oil, spathulenol.

Experimental.

Plant name.

Acca selowiana (O. Berg.) Burret (Syn: *Feijoa selowiana* (O. Berg.) O. Berg (1). Local name, "falso guayabo" or "guayabo de jardín".

Source.

A. selowiana is an aromatic plant that growth to SE of Brazil and Uruguay. The fruits has been used as food. In Argentina, it has been used as ornamental plants. Flowering plants were collected in San Salvador de Jujuy, Dr. Manuel Belgrano department, Jujuy province, Argentina. Voucher specimens are kept in the Herbarium of the Facultad de Ciencias Agrarias of Jujuy, Universidad of Jujuy (Rotman 1361 JUA).

Plant Part

The leaves of *A. selowiana* were hydrodistilled using a Clevenger-type apparatus, 3 h. The oils obtained were dried over anhydrous sodium sulphate and stored in a refrigerator until analysis.

Previous Work

As far as we know, the oil from of *A. selowiana* has never been analysed.

Present Work

GC analyses were accomplished with use of a Shimadzu GC-R1A (FID) gas-chromatograph, fitted with a 30 m x 0.25 mm (0.25 µm film thickness) fused silica capillary column coated with a DB-5 (J&W). The GC operating conditions were as follows: oven temperature programmed from 40 -230°C at 2°C /min, injector and detector temperatures 240°C, carrier gas was nitrogen at a constant flow at 0.9 mL/min. Identification of the components was performed by comparison of their retention times with those of pure authentic samples. GC/MS analyses were performed with a Perkin Elmer Q-700 equipped with a SE-30 capillary column (30 m x 0.25 mm; coating thickness 0.25 µm film). Analytical conditions; oven

temperature from 40⁰C to 230⁰C at 2⁰C/min, carrier gas helium at a constant flow at 0.9 mL/min, source 70 eV. The oil components were identified by two computer library MS searches using retention indices as a preselection routine, and visual inspection of the mass spectra from literature for confirmation (2). The compounds identified in the oil are listed in Table I.

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References

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2. R.P. Adams 1995, Identification of Essential Oil Components by Gas Chromatography and Mass Spectrometry. Allured Publ. Corp., Carol Stream, IL, USA.

Table I. Essential oil composition of *Acca sellowiana* (O. Berg.) Burret.

Components	Retention Index		Composition (%)	Methods of identification
	Apolar	Polar		
α -thujene	931	1030	0.1	RI,MS
α -pinene	939	1028	1.8	RI,MS,CO
3-octanol	980		0.2	RI,MS,CO
cis-β-terpineol	1120		8.7	RI,MS,CO
α -terpineol	1176	1714	0.3	RI,MS
C15H24	1208		0.2	RI,MS
α -cubebene	1351	1465	0.7	RI,MS
damascenone *	1371		0.1	RI,MS
β -bourbonene	1386	1515	0.6	RI,MS
β -elemene	1391	1585	2.8	RI,MS
β-caryophyllene	1418	1594	8.1	RI,MS,CO
β -gurjunene	1428	1580	0.3	RI,MS
α -humulene	1454	1667	3.5	RI,MS
germacrene D	1480	1706	3.5	RI,MS
germacrene B	1556	1834	4.2	RI,MS
calamenene *	1517	1826	4.3	RI,MS
δ-cadinene	1523	1758	9.6	RI,MS
spathulenol	1576	2144	24.4	RI,MS,CO
caryophyllene oxide	1581	2034	2.4	RI,MS
globulol	1583	2101	4.9	RI,MS
cubenol	1632	2097	3.7	RI,MS
C15H26O	1645		0.2	RI,MS
C15H26O	1711		0.4	RI,MS
TOTAL			85.0	
Yield (% fresh weight)			0.1	

Footnote.(*) Compounds are listed in order of their elution from a DB-5 column. Co: peak identifications are based on standard comparison with relative retention time. MS: peak identifications are based on MS comparison with file spectra.