Quim. Nova, Vol. 48, No. 6, 2025

Supplementary Material

EXPLORING THE ANTIOXIDANT ACTIVITY OF *Eugenia uniflora* L. EXTRACTS: A COMPARATIVE APPROACH BY DIFFERENT TECHNIQUES

Vinicius Monteiro Schaffka[a], Cássia Gonçalves Magalhães[a,*] and Romaiana Picada Pereira[a]

[a]Departamento de Química, Universidade Estadual de Ponta Grossa, 84030-000 Ponta Grossa – PR, Brasil

Received: 01/20/2025; accepted: 06/03/2025; published online: 07/01/2025

*e-mail: cgmagalhaes@uepg.br

Table 1S. GC-MS analysis of *E. uniflora* essential oil (EU1)

RRI[a]	RRI[b]	Compound	Relative area / %
1102	1098	linalool	0.29
1289	1284	anethole	0.13
1340	1340	δ-elemene	0.51
1379	1377	α-copaene	0.28
1388	1384	β-bourbonene	0.32
1395	1394	β-elemene	**3.05**
1409	–	n.i	0.18
1423	1418	caryophyllene	1
1433	–	n.i	0.21
1438	1435	γ-elemene	**2.67**
1443	1440	aromandendrene	0.16
1458	1455	α-humulene	0.3
1466	1457	alloaromadendrene	0.87
1483	–	n.i	0.46
1488	1480	germacrene D	**12.64**
1491	–	n.i	0.24
1497	–	n.i	0.19
1503	1500	curzerene	**13.28**
1506	1499	α-muurolene	0.15
1511	1510	bulnesene	1.62
1515	–	n.i	0.18
1519	1524	δ-cadinene	0.22
1529	1519	cubebol	1.78
1541	–	n.i	0.15
1544	–	n.i	0.46
1547	1545	selina-3,7(11)-diene	0.27
1566	1561	germacrene B	**16.19**
1573	1580	(–)-globulol	0.17
1584	1582	spathulenol	1.81
1590	1593	viridiflorol	0.93
1593	–	n.i	0.31

Table 1S. GC-MS analysis of *E. uniflora* essential oil (EU1) (cont.)

RRI[a]	RRI[b]	Compound	Relative area / %
1598	–	n.i	1.05
1605	1605	β-elemenone	7.68
1611	–	n.i	0.79
1613	–	n.i	0.24
1622	–	n.i	0.16
1625	–	n.i	0.15
1636	1630	isospathulenol	0.31
1644	–	n.i	1.03
1649	1640	τ-muurolol	1.23
1654	1648	τ-cadinol	0.41
1659	–	n.i	0.55
1662	1662	cadin-4-en-10-ol	1.51
1668	1669	atractylone	0.43
1693	–	n.i	0.55
1702	–	furanodiene	4.3
1707	1696	germacrone	**9.03**
1712	–	n.i	0.28
1718	–	n.i	0.24
1725	–	n.i	0.15
1744	–	n.i	0.14
1755	1755	oxidoselina-1,3,7(11)-trien-8-one	**4**
1760	–	n.i	0.92
1765	–	n.i	0.86
1769	1767	anthracene	1.07
1801	–	n.i	0.21
1805	–	n.i	0.58
1827	–	n.i	0.49
1834	–	n.i	0.46
1875	–	n.i	0.19

[a]Calculated relative retention indices using the column Rtx-5MS (GC-MS) and the *n*-alkanes series C8-C20; [b]published[1] relative retention indices for non-polar columns. n.i: not identified.

Table 2S. GC-MS analysis of *E. uniflora* essential oil (EU2)

RRI[a]	RRI[b]	Compound	Relative area / %
1050	1050	β-ocimene	0.17
1341	1340	δ-elemene	0.89
1379	1377	α-copaene	1.3
1388	1384	β-bourbonene	0.24
1396	1394	β-elemene	**2.67**
1424	1418	caryophyllene	1.89
1430	–	n.i	0.14
1433	–	n.i	0.23
1439	1435	γ-elemene	**5.96**
1443	1440	aromandendrene	0.29
1458	1455	α-humulene	1.51
1466	1457	alloaromadendrene	1.13
1489	1480	germacreno D	**17.01**
1492	–	n.i	0.12
1497	–	n.i	0.25
1505	1500	curzerene	**14.61**
1512	1510	bulnesene	1.56
1520	1524	δ-cadinene	0.28
1530	1519	cubebol	2.26
1541	–	n.i	0.31
1545	–	n.i	0.58
1548	1545	selina-3,7(11)-diene	0.4
1569	1561	germacreno B	**32.76**
1572	–	n.i	0.26
1575	1580	(–)-globulol	0.27
1585	1582	spathulenol	1.56
1591	1593	viridiflorol	1.2
1594	–	n.i	0.18

Table 2S. GC-MS analysis of *E. uniflora* essential oil (EU2) (cont.)

RRI[a]	RRI[b]	Compound	Relative area / %
1598	–	n.i	0.89
1600	–	n.i	0.32
1609	1605	β-elemenone	0.48
1619	–	n.i	0.13
1625	–	n.i	0.18
1630	–	n.i	0.23
1635	–	n.i	0.26
1645	–	n.i	0.34
1649	1640	τ-muurolol	1.24
1653	1648	τ-cadinol	0.36
1659	–	n.i	0.79
1662	1662	cadin-4-en-10-ol	1.29
1683	–	n.i	0.26
1686	–	n.i	0.1
1703	–	furanodiene	1.05
1720	–	n.i	0.07
1725	–	n.i	0.11
1743	–	n.i	0.19
1757	–	n.i	0.3
1768	1767	anthracene	0.24
1774	–	n.i	0.34
1801	–	n.i	0.22
1805	–	n.i	0.37
1875	–	n.i	0.2

[a]Calculated relative retention indices using the column Rtx-5MS (GC-MS) and the *n*-alkanes series C8-C20; [b]published[1] relative retention indices for non-polar columns. n.i: not identified.

Table 3S. GC-MS analysis of *E. uniflora* essential oil (EU3)

RRI[a]	RRI[b]	Compound	Relative area / %
1341	1340	δ-elemene	0.81
1379	1377	α-copaene	0.76
1388	1384	β-bourbonene	0.36
1396	1394	β-elemene	**3.88**
1423	1418	caryophyllene	0.99
1433	–	n.i	0.27
1438	1435	γ-elemene	0.86
1443	1440	aromandendrene	0.34
1455	1455	α-humulene	0.27
1458	–	n.i	0.45
1466	1457	alloaromadendrene	1.04
1482	–	n.i	0.94
1487	1480	germacrene D	**10.02**
1491	–	n.i	0.53
1497	–	n.i	0.84
1504	1500	curzerene	**21.51**
1512	1510	bulnesene	2.1
1520	1524	δ-cadinene	0.37
1529	1519	cubebol	**3.16**
1538	–	n.i	0.18
1544	–	n.i	0.26
1564	1561	Germacrene B	**5.9**
1573	1580	(–)-globulol	0.36
1584	1582	spathulenol	2.66
1590	1593	viridiflorol	1.58
1593	–	n.i	0.22
1598	–	n.i	1.4
1611	–	n.i	1.04
1618	–	n.i	0.23

Table 3S. GC-MS analysis of *E. uniflora* essential oil (EU3) (cont.)

RRI[a]	RRI[b]	Compound	Relative area / %
1625	–	n.i	0.07
1630	–	n.i	0.17
1632	–	n.i	0.13
1635	1630	isospathulenol	0.62
1646	–	n.i	0.59
1649	1640	τ-muurolol	1.17
1654	1648	τ-cadinol	0.31
1662	1660	cadin-4-en-10-ol	2.37
1669	1669	atractylone	1.23
1676	–	n.i	0.13
1705	–	furanodiene	**8.55**
1709	1696	germacrone	**8.58**
1713	–	n.i	0.46
1725	–	n.i	0.17
1731	–	n.i	0.24
1744	–	n.i	0.59
1756	1755	oxidoselina-1,3,7(11)-trien-8-one	**7.12**
1760	–	n.i	0.38
1765	1767	anthracene	**2.08**
1774	–	n.i	0.22
1801	–	n.i	0.13
1875	–	n.i	0.31
1907	–	n.i	0.18
1913	–	n.i	0.16
2023	–	n.i	0.42
2327	–	n.i	0.3

[a]Calculated relative retention indices using the column Rtx-5MS (GC-MS) and the *n*-alkanes series C8-C20; [b]published[1] relative retention indices for non-polar columns. n.i: not identified.

REFERENCE

1. Adams, R. P.; *Identification of Essential Oil Components by Gas Chromatography/Quadrupole Mass Spectroscopy*; Allured Publishing Corporation: Carol Stream, IL, USA, 2009.