

深圳仙湖植物园
植物标本馆 (SZG)

Shenzhen Fairy Lake Botanical Herbarium

采集人: 张寿洲、李良等人

采集号: 3748

采集日期: 2016-7-20

采集地点: 海南省五指山

环境: 路旁

海拔: 500 米

植物性状: 灌木

胸径:

体高:

叶:

花: 紫红色

果实:

树皮:

中文名: 红紫珠

科名: 马鞭草科

拉丁名: *Callicarpa Rubella* Lindl.

附记:

标本份数: 2



018209

N^o 0017521



采集号 3748

裸花紫珠

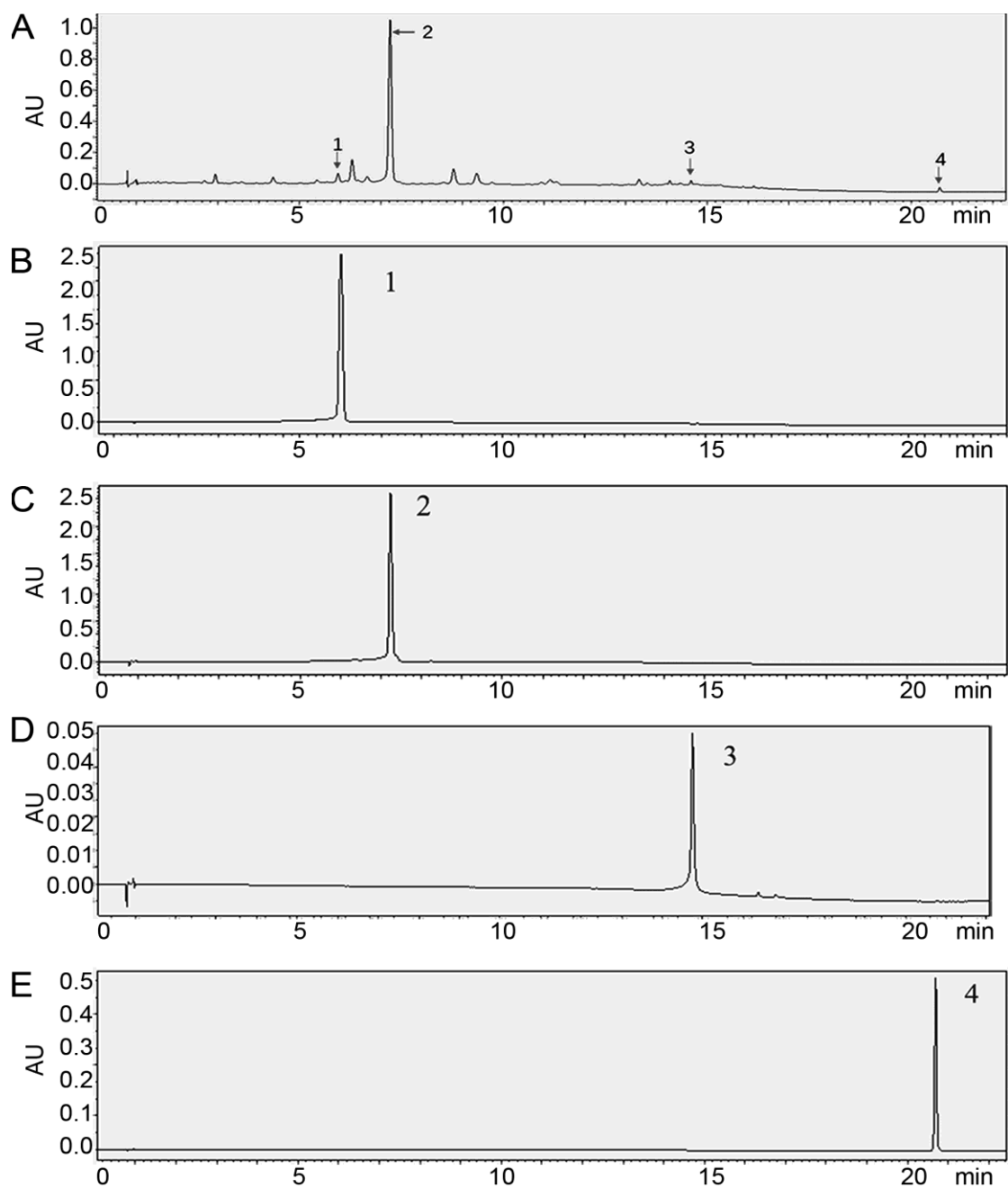
马鞭草科

Callicarpa nudiflora Hook. et Arn.

鉴定人: 陈炳辉

2016 年 12 月 20 日

Supplementary Figure 1 The plant specimen picture of *Callicarpa nudiflora*.



Supplementary Figure 2 The UPLC spectrum of four main compounds.

(A) 1: Forsythoside B (0.98%), 2: Acteoside (33.26%), 3: Luteolin (0.33%),

4: 5,4'-dihydroxy-3,7,3'-trimethoxyflavone (0.42%).

(B-E) The UPLC spectrum of Forsythoside B. (B) Acteoside, (C) Luteolin,

(D) 4: 5,4'-dihydroxy-3,7,3'-trimethoxyflavone, (E) standard sample.

Supplementary Table 1 Identification of chemical constituents of *Callicarpa nudiflora* by UPLC-ESI-Q-TOF-MS

No.	T _R (min)	Identification	Negative (m/z)	ion ppm	Positive (m/z)	ion ppm	Molecular formula	Molecular weight (Da)	MS/MS (m/z)	Chemical type
1	2.05*	catalpol	397.0904	-0.7	-	-	C ₁₅ H ₂₂ O ₁₀	362.1213	-	I
2	5.16	caffeic acid	179.0347	-1.7	-	-	C ₉ H ₈ O ₄	180.0423	-	PA
3	5.35	8-acetyl-harpagide	405.1399	-0.9	429.1356	-1.2	C ₁₇ H ₂₆ O ₁₁	406.1475	(-)165.0552 (+)149.0578	I
4	5.82	6'- <i>O</i> - <i>trans</i> -caffeoylcatalpol	523.1456	-0.2	547.1423	0.1	C ₂₄ H ₂₈ O ₁₃	524.1530	(-)323.0765,161.0241 (+)325.0899,163.0369,135.0416	I
5	6.06*	verminoside	523.1456	-0.3	547.1399	-2.3	C ₂₄ H ₂₈ O ₁₃	524.1530	(-)323.0766,179.0345,161.0242 (+)163.0380	I
6	6.56	β-hydroxyacteoside	639.1930	-0.1	663.1890	-0.5	C ₂₄ H ₂₈ O ₁₃	524.1530	(-)475.1400,179.0347,161.0244,151.0400 (+)163.0383, 135.0421	P
7	6.67	β-hydroxyacteoside	639.1929	-0.2	663.1893	-0.2	C ₂₉ H ₃₆ O ₁₆	640.2003	(-)529.1556,475.1447,179.0347,161.0243, 133.0291 (+)163.0385,135.0438	P
8	7.18*	6-Hydroxyluteolin-7- <i>O</i> -β-D-glucoside	463.0877	-1.0	465.1013	-1.5	C ₂₁ H ₂₀ O ₁₂	464.0955	(-)301.0346 (+)303.0492, 301.0330	F
9	7.88	6- <i>O</i> - <i>trans</i> -feruloylcatalpol	537.1604	-1.7	561.1559	-2.0	C ₂₅ H ₃₀ O ₁₃	538.1686	(-)285.0391, 175.0394 (+)449.1033,287.0542,177.0543,163.0382,133.0855	I
10	8.04*	forsythoside B	755.2402	-0.3	779.2338	-3.1	C ₃₄ H ₄₄ O ₁₉	756.2477	(-)593.2084,179.0344,161.0242,135.0446 (+)163.0383,135.0449	P
11	8.37*	nudifloside	523.1450	-1.3	547.1415	-0.8	C ₂₄ H ₂₈ O ₁₃	524.1530	(-)361.0918,161.0240,133.0290	I

12	8.60*	luteoloside	447.0928	-1.1	449.1070	-0.9	C ₂₁ H ₂₀ O ₁₁	448.1006	(+)363.1072,163.0383,135.0427 (-)285.0397	F
13	8.73*	lutidin-7-O-neohesperido side	593.1516	0.3	595.1652	-0.6	C ₂₇ H ₃₀ O ₁₅	594.1585	(+)287.0548,153.0166 (-)285.0395	F
14	8.77*	acteoside	623.1979	-0.3	647.1945	-0.1	C ₂₉ H ₃₆ O ₁₅	624.2054	(+)287.0541 (-)461.1660,315.1079,179.0346,161.0243,1 13.0242	P
15	9.52	isoacteoside	623.1976	-0.9	647.1939	-0.7	C ₂₉ H ₃₆ O ₁₅	624.2054	(+)163.0388,135.0436 (-)461.1656,315.1070,179.0345,161.0241,1 35.0446	P
16	9.70	parvifloroside B	623.1978	-0.5	647.1935	-1.2	C ₂₉ H ₃₆ O ₁₅	624.2054	(+)163.0384,135.0430 (-)461.1651,179.0345,161.0241,135.0444,1 33.0289	P
17	9.96*	lutidin-4'-O-β-D- glucoside	447.0928	-1.1	449.1063	-1.6	C ₂₁ H ₂₀ O ₁₁	448.1006	(+)163.0375,135.0419 (-)285.0400, 133.0288	F
18	10.42	chrysoeriol-7-O-β-D-gluc oside	461.1082	-1.6	463.1215	-2.0	C ₂₂ H ₂₂ O ₁₁	462.1162	(+)287.0541 (-)255.0293	F
19	10.51	10-O-trans-p-coumaroylg eniposidic acid	519.1506	-0.4	-	-	C ₂₅ H ₂₈ O ₁₂	520.1581	(+)301.0687 (-)339.0867,313.1072,163.0395,161.0238	I
20	10.62	luteolin-3'-O-β-D-glucop yranoside	447.0932	-0.2	449.1066	-1.2	C ₂₁ H ₂₀ O ₁₁	448.1006	(-)285.0401, 133.0291 (+)287.0544,153.0166	F
21	11.22	6'-O-trans-p-coumaroyl-8 -epiloganic acid	521.1656	-1.5	545.1618	-1.2	C ₂₅ H ₃₀ O ₁₂	522.1737	(+)179.0689,165.0536 (-)297.1125, 195.0654,163.0396	I
22	11.68	martynoside	651.2291	-0.5	675.2249	-1.0	C ₃₁ H ₄₀ O ₁₅	652.2367	(-)175.0396,161.0238,160.0161 (+)195.0632,177.0543,163.0736	P

23	12.06*	luteolin	285.0401	-1.3	287.0549	-0.4	C ₁₅ H ₁₀ O ₆	286.0477	(-)179.0344,133.0291 (+)339.1055	F
24	14.02*	5,4'-dihydroxy-3,7,3'-trimethoxyflavone	343.0817	-1.9	345.0962	-0.7	C ₁₈ H ₁₆ O ₇	344.0896	(-)328.0577,313.0347 (+)330.0726,315.0487	F

*: standard compounds, I: iridoid glycosides, F: flavanones, P: phenylethanoid glycoside, PA: phenylpropionic acid