

Supporting Information

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Investigation of *In Vitro* Anti-diabetic Activity and Phenolic Profile of Mulberry Leaf Tinctures

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Table S1. Yield results of fresh and dried leaf tinctures of *M. alba*, *M. nigra*, and *M. rubra* species

Sample code	Mulberry leaf dry weight (g)	*Amount of solvent (mL)	Tincture dry weight (g)	Yield (%)
TMaF 1:4	5.0	20	0.4376	8.75
TMaF 1:5	5.0	25	0.4869	9.74
TMaF 1:6	5.0	30	0.5303	10.61
TMaF 1:7	5.0	35	0.5915	11.83
TMaF 1:8	5.0	40	0.4808	9.62
TMnF 1:4	5.0	20	0.4038	8.08
TMnF 1:5	5.0	25	0.4714	9.43
TMnF 1:6	5.0	30	0.5109	10.22
TMnF 1:7	5.0	35	0.5374	10.75
TMnF 1:8	5.0	40	0.5340	10.68
TMrF 1:4	5.0	20	0.4372	8.74
TMrF 1:5	5.0	25	0.4908	9.82
TMrF 1:6	5.0	30	0.5001	10.00
TMrF 1:7	5.0	35	0.5507	11.01
TMrF 1:8	5.0	40	0.5173	10.35
TMaD 1:4	5.0	20	0.3556	7.11
TMaD 1:5	5.0	25	0.6283	12.57
TMaD 1:6	5.0	30	0.7925	15.85
TMaD 1:7	5.0	35	0.8924	17.85
TMaD 1:8	5.0	40	0.7772	15.54
TMnD 1:4	5.0	20	0.5407	10.81
TMnD 1:5	5.0	25	0.6895	13.79
TMnD 1:6	5.0	30	0.7646	15.29
TMnD 1:7	5.0	35	0.9011	18.02
TMnD 1:8	5.0	40	0.7009	14.02
TMrD 1:4	5.0	20	0.5291	10.58
TMrD 1:5	5.0	25	0.7735	15.47
TMrD 1:6	5.0	30	0.8441	16.88
TMrD 1:7	5.0	35	1.0175	20.35
TMrD 1:8	5.0	40	0.9031	18.06

TMaF: Fresh leaf tincture of *M. alba* L., **TMnF:** Fresh leaf tincture of *M. nigra* L., **TMrF:** Fresh leaf tincture of *M. rubra* L., **TMaD:** Dried leaf tincture of *M. alba* L., **TMnD:** Dried leaf tincture of *M. nigra* L., **TMrD:** Dried leaf tincture of *M. rubra* L.; **1:4, 1:5, 1:6, 1:7 and 1:8** : Ground mulberry leaf: solvent ratio (w,v). *70:30% (Ethyl alcohol:water) hydroalcoholic solvent system was used for the tincture of mulberry leaves.

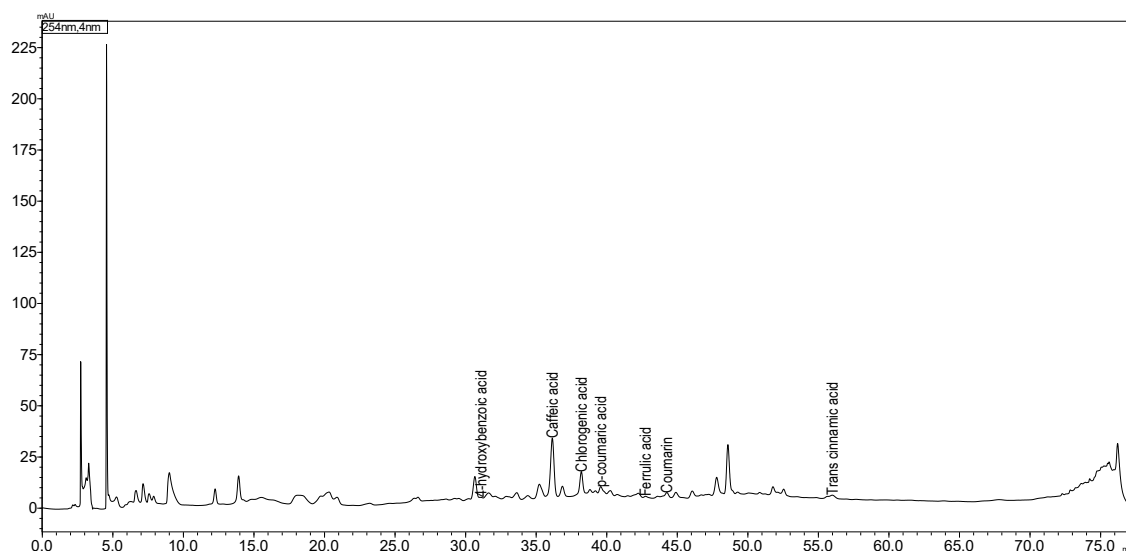


Figure S1. HPLC-DAD chromatogram of **TMrD 1:4** (Tincture of dried leaves of *M. rubra* L. in a 1:4 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

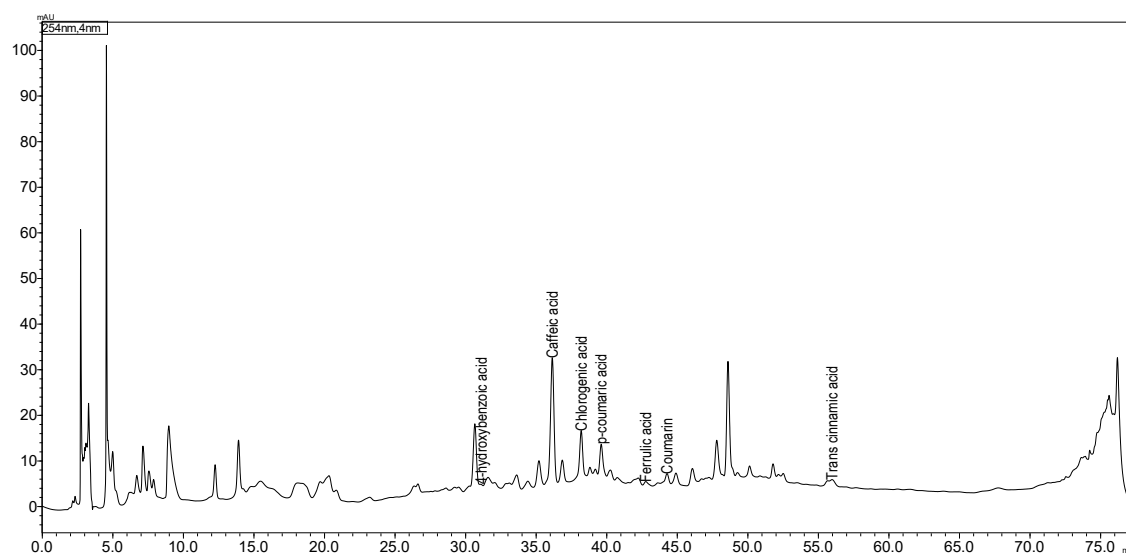


Figure S2. HPLC-DAD chromatogram of **TMrD 1:5** (Tincture of dried leaves of *M. rubra* L. in a 1:5 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

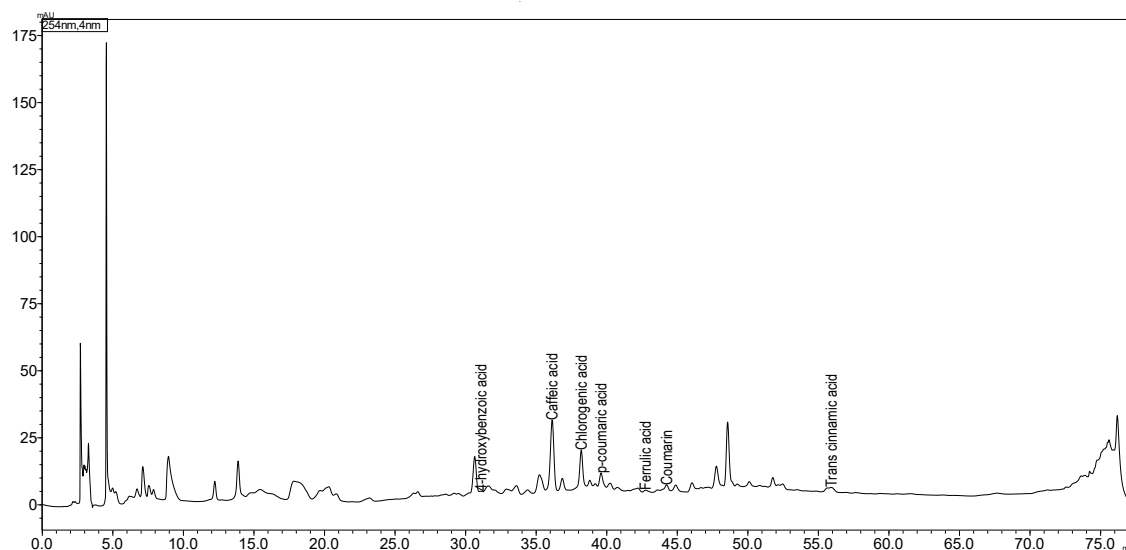


Figure S3. HPLC-DAD chromatogram of **TMrD 1:6** (Tincture of dried leaves of *M. rubra* L. in a 1:6 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

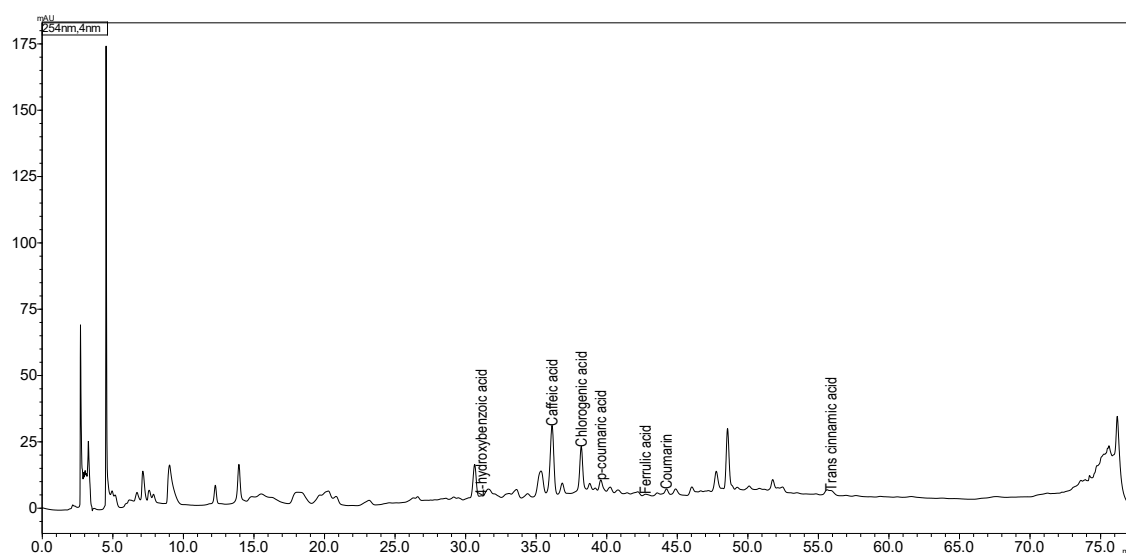


Figure S4. HPLC-DAD chromatogram of **TMrD 1:7** (Tincture of dried leaves of *M. rubra* L. in a 1:7 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

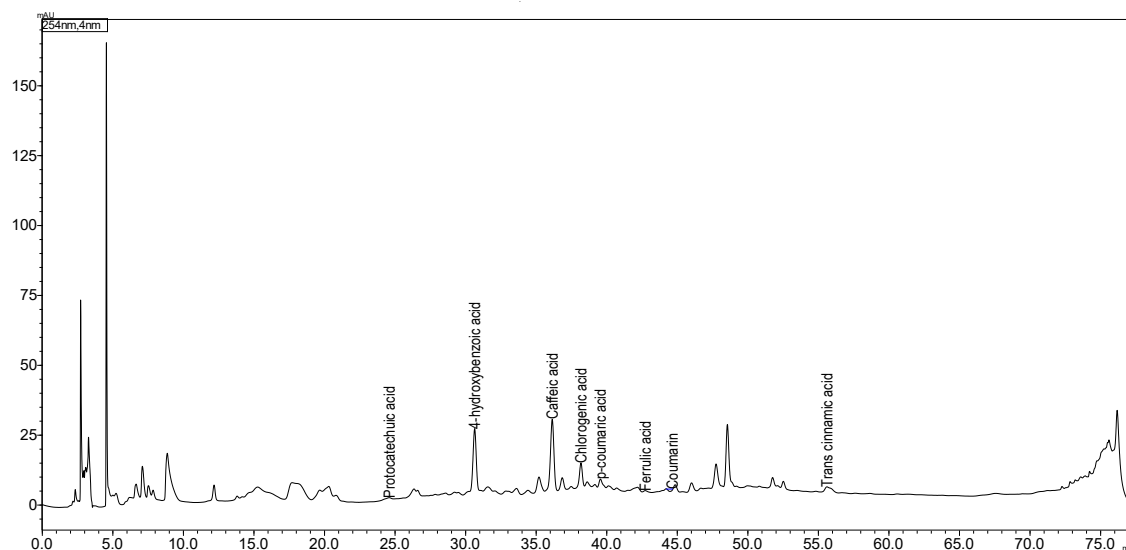


Figure S5. HPLC-DAD chromatogram of **TMrD 1:8** (Tincture of dried leaves of *M. rubra* L. in a 1:8 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

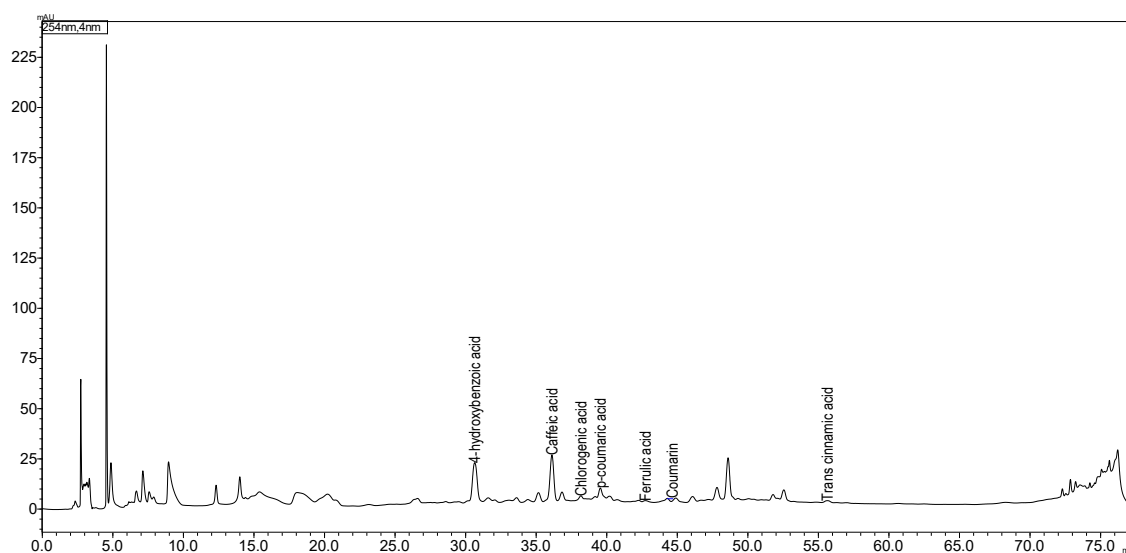


Figure S6. HPLC-DAD chromatogram of **TMrF 1:4** (Tincture of fresh leaves of *M. rubra* L. in a 1:4 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

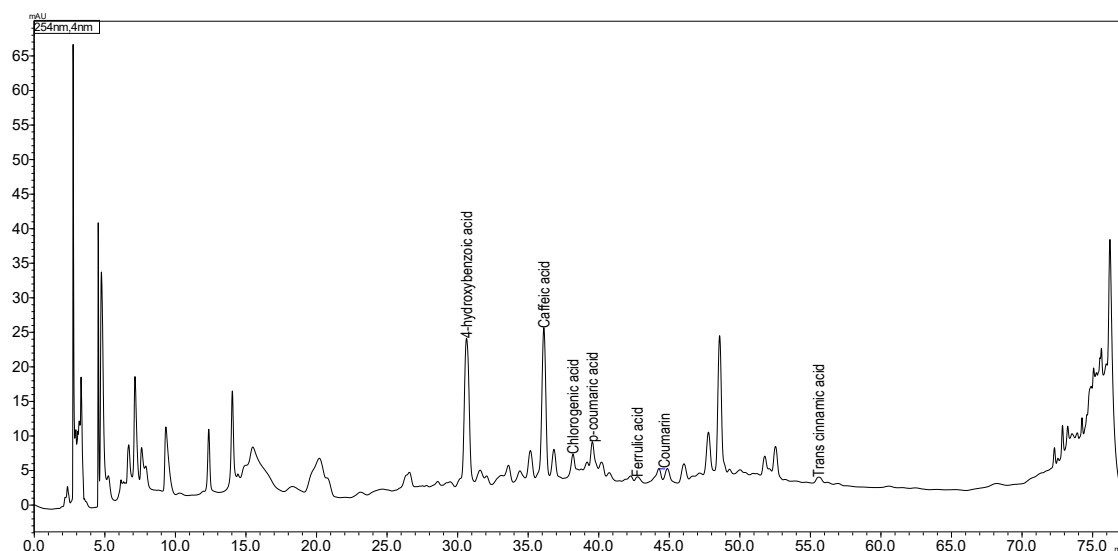


Figure S7. HPLC-DAD chromatogram of **TMrF 1:5** (Tincture of fresh leaves of *M. rubra* L. in a 1:5 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

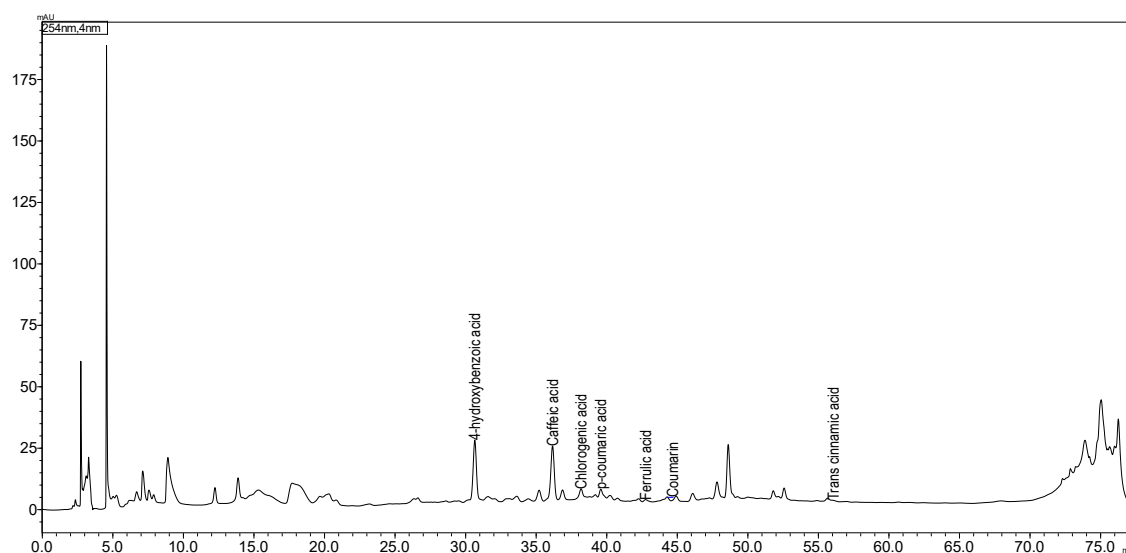


Figure S8. HPLC-DAD chromatogram of **TMrF 1:6** (Tincture of fresh leaves of *M. rubra* L. in a 1:6 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

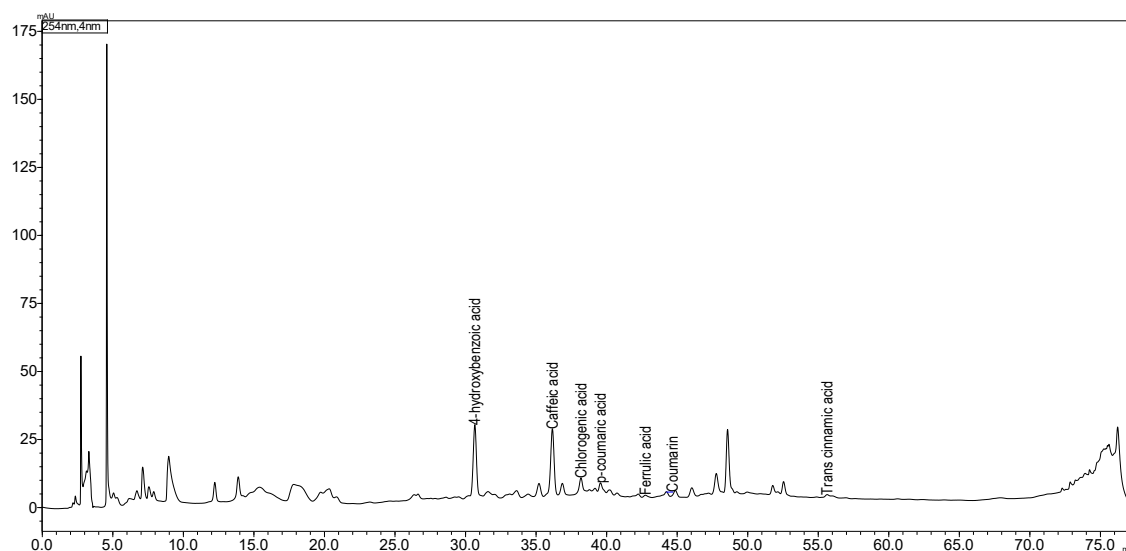


Figure S9. HPLC-DAD chromatogram of **TMrF 1:7** (Tincture of fresh leaves of *M. rubra* L. in a 1:7 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)

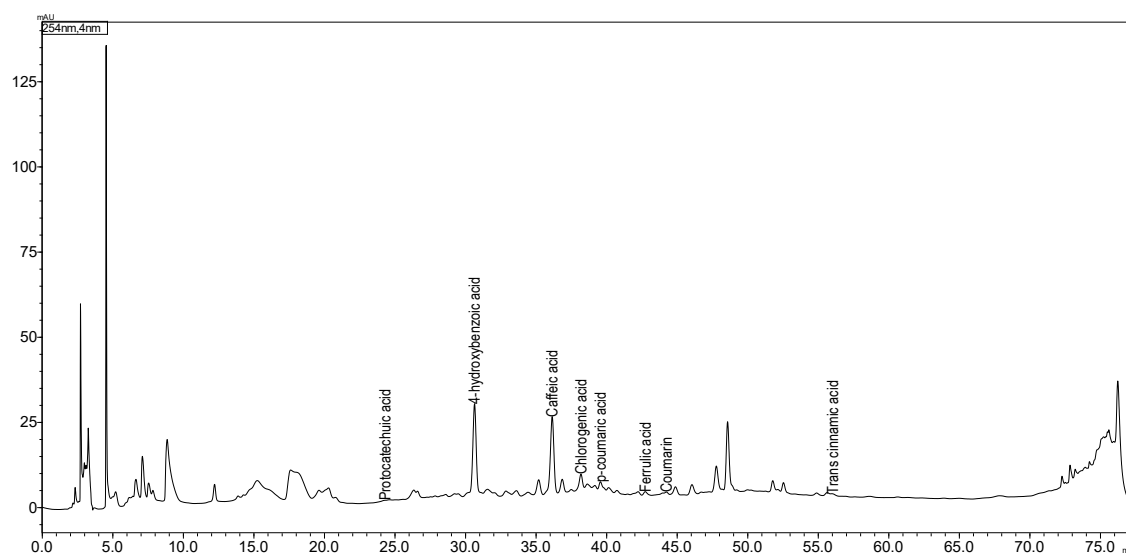


Figure S10. HPLC-DAD chromatogram of **TMrF 1:8** (Tincture of fresh leaves of *M. rubra* L. in a 1:8 ratio) at 254 nm (Inertsil ODS-3 column (4 μ m, 4 mm x 150 mm). Mobile phase 0.1% acetic acid-methanol (gradient elution). Flow rate 1 mL/min. Diode array detection 254 nm.)