Table S1. GC–FID method validation parameters for the quantification of phytochemicals in *Musa paradisiaca* extract (MPE).

Compound	Slope (m)	Intercept (b)	R^2	LOD (μg/mL)	LOQ (μg/mL)	Recovery (%)	Intra-day %RSD	Inter-day %RSD
Caffeic acid	0.2335	0.0142	0.9977	0.010	0.034	97.0	2.72	3.48
Lanosterol	0.0703	0.0275	0.9978	0.015	0.050	98.1	2.15	3.66
Syringin	0.2105	0.0234	0.9968	0.010	0.033	104.6	2.32	3.68
Myricetin	0.2188	0.0287	0.9963	0.009	0.030	95.9	2.84	4.40
Sitoindoside I	0.0927	0.0331	0.9958	0.012	0.040	92.3	2.64	4.98
Sitoindoside II	0.0869	0.0415	0.9972	0.014	0.046	94.5	3.11	4.75
Cyclomusatenol	0.0816	0.0475	0.9977	0.016	0.053	93.5	2.49	4.67
Cyclomusatenone	0.0758	0.0378	0.9981	0.013	0.043	96.2	2.88	4.12
Luteolin	0.2246	0.0192	0.9989	0.010	0.033	100.5	1.95	3.64
Quercetin	0.2295	0.0186	0.9979	0.008	0.027	102.4	2.08	3.83
Kaempferol	0.2274	0.0317	0.9969	0.012	0.040	105.3	2.04	3.15
Capsaicin	0.0822	0.0396	0.9945	0.010	0.034	101.6	1.86	2.51
β-Sitosterol	0.0882	0.0239	0.9987	0.009	0.031	99.7	1.62	3.99
p-Hydroxybenzoic acid	0.2473	0.0153	0.9986	0.006	0.020	99.1	2.16	3.72
Leucocyanidin	0.1362	0.0259	0.9984	0.011	0.036	94.8	3.05	4.28
Apigenin	0.2383	0.0390	0.9982	0.016	0.052	101.8	3.36	4.70

All calibration curves were linear (R^2 = 0.994–0.999) within 0.1–100 μg/mL. Limits of detection (LOD) and quantification (LOQ) were determined using signal-to-noise ratios of 3 and 10, respectively. Recovery values (92.3–106.4%) confirmed accuracy, while intra- and inter-day precision (RSD < 5%) indicated excellent method reproducibility.

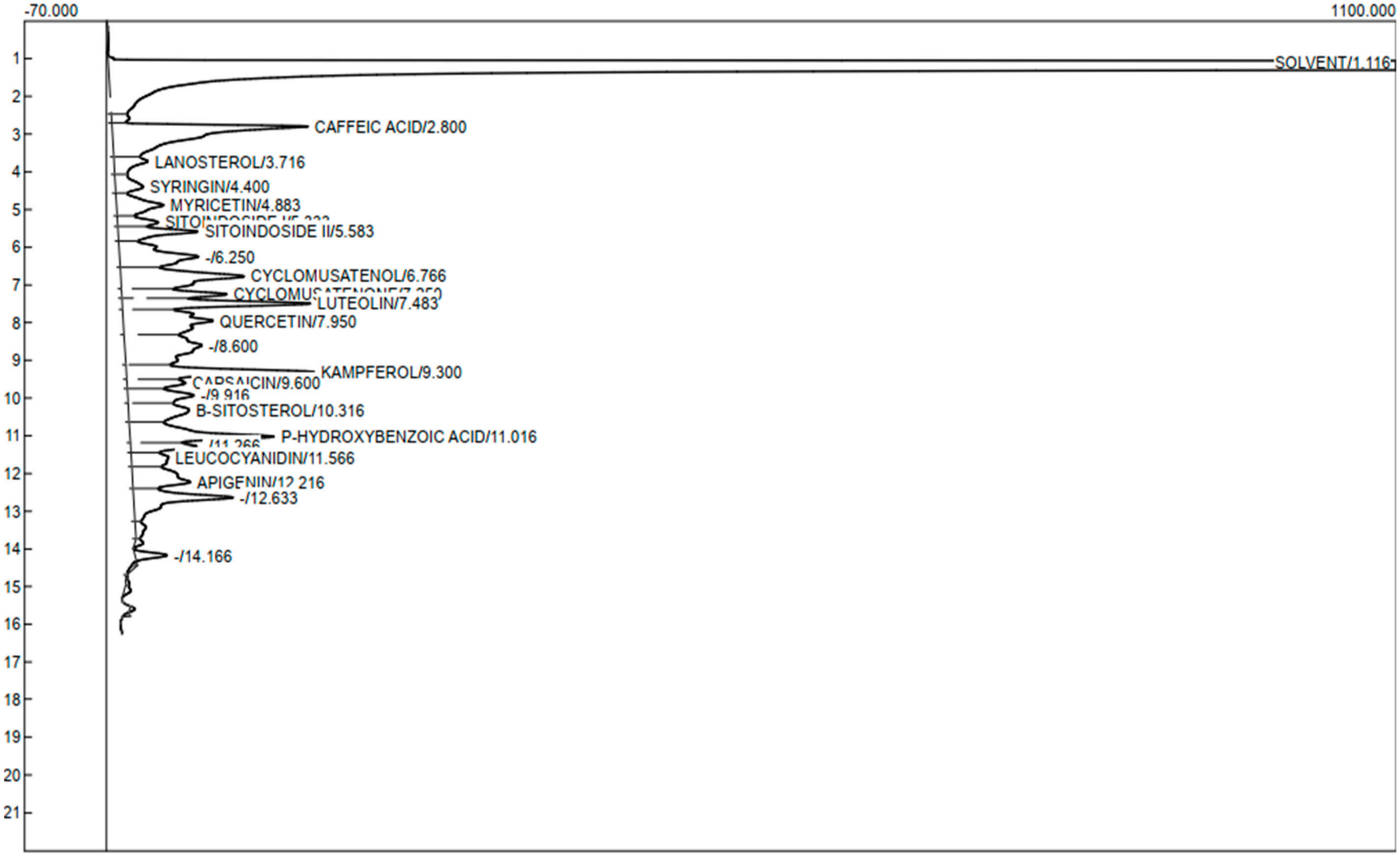


Figure S1. GC-FID chromatogram of *Musa paradisiaca* peel ethanol extract (MPE) showing identified phytochemical constituents.