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Supplementary Information

Overall control of quality consistency of Citri Retriculatae Pericapium by combining HPLC fingerprint, terahertz time-domain spectroscopy and chemometrics

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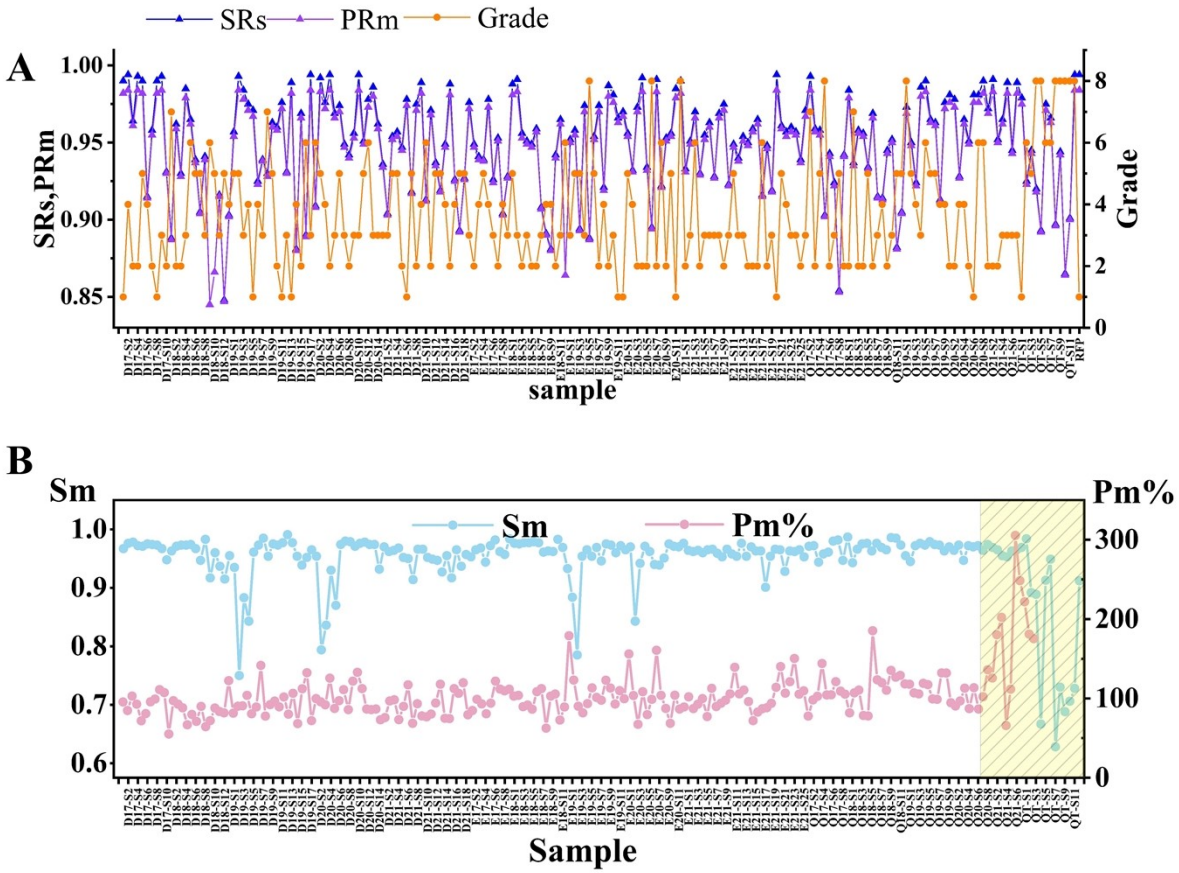

Fig.S1 Dotted line graph of reliability parameters and QRFP quality rating levels for 199 batches of CRP (A). *Sm* and *Pm* dotted line plots of 199 batches of CRP samples (B).

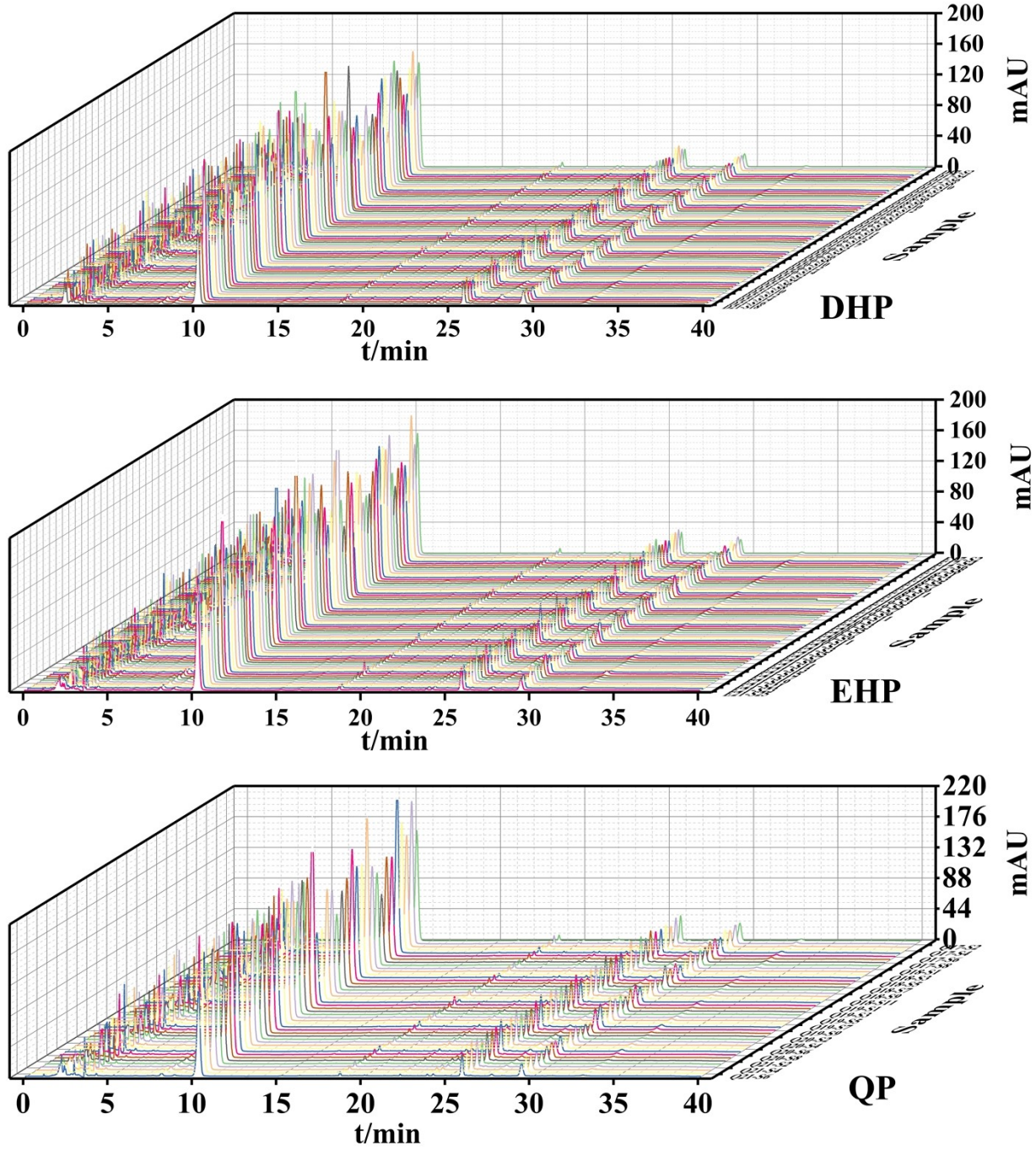

Fig.S2 HPLC-FP of 199 batches of CRP

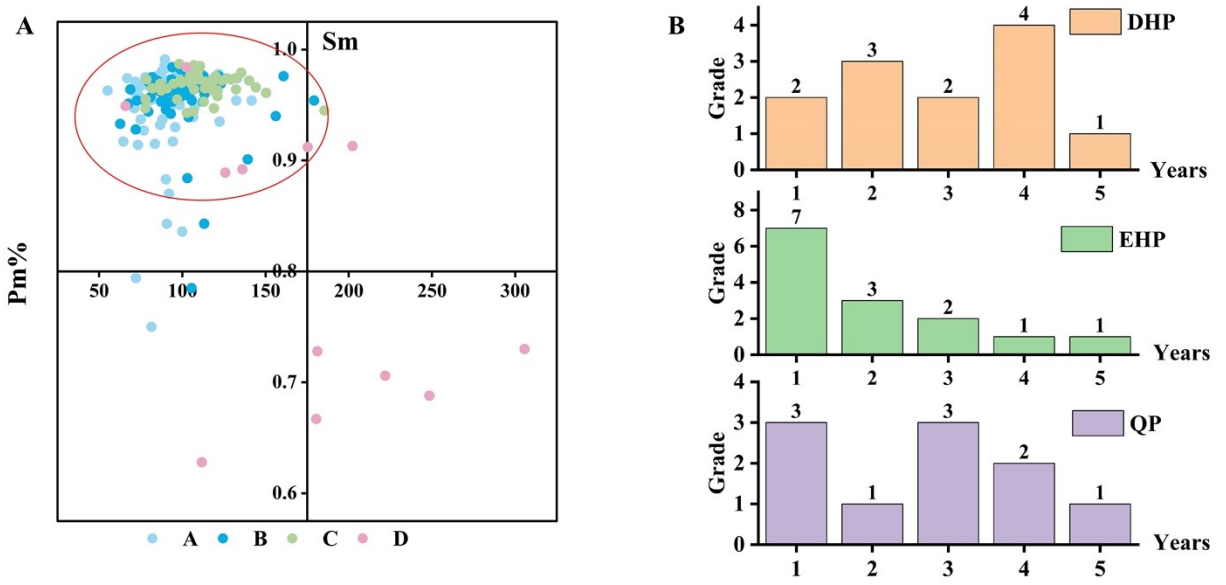

Fig.S3 $\boldsymbol{P}_{\mathrm{m}}$ and $\boldsymbol{S}_{\mathrm{m}}$ median scatter plots of QRFM evaluation results for 199 batches of CRP (A). Histogram of DHP, EHP and QP year identification results (B).

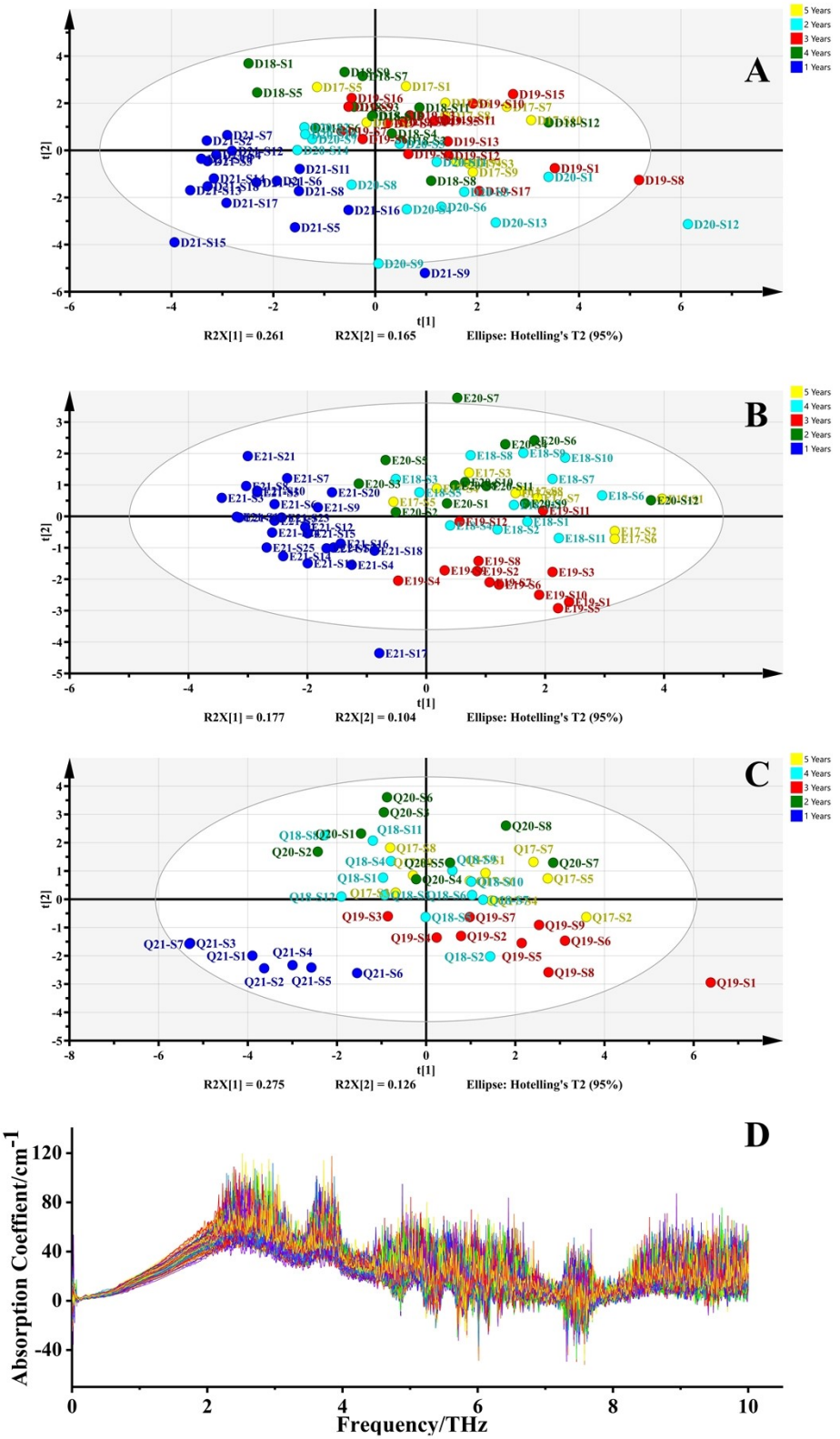

Fig.S4 DHP, EHP and QP1-5 years score plots (A, B, C). THz-TDs plots for 199 batches of samples.

2 Supplementary Tables

Table S1 Table of origin, year and species information for 100 CRP sample batches.

Clasification	Sample	Vintages	Varietals	Origins
APA	Q17-S1	2017	QP	Guangdong , Xinhui
	Q17-S2	2017	QP	Guangdong , Xinhui
	Q17-S3	2017	QP	Guangdong , Xinhui
	Q17-S4	2017	QP	Guangdong , Xinhui
	Q17-S5	2017	QP	Guangdong , Xinhui
	Q17-S6	2017	QP	Guangdong , Xinhui
	Q17-S7	2017	QP	Guangdong , Xinhui
	Q17-S8	2017	QP	Guangdong , Xinhui
	Q17-S9	2017	QP	Guangdong , Xinhui
	Q18-S1	2018	QP	Guangdong , Xinhui
	Q18-S2	2018	QP	Guangdong , Xinhui
	Q18-S3	2018	QP	Guangdong , Xinhui
	Q18-S4	2018	QP	Guangdong , Xinhui
	Q18-S5	2018	QP	Guangdong , Xinhui
	Q18-S6	2018	QP	Guangdong , Xinhui
	Q18-S7	2018	QP	Guangdong , Xinhui
	Q18-S8	2018	QP	Guangdong , Xinhui
	Q18-S9	2018	QP	Guangdong , Xinhui
	Q18-S10	2018	QP	Guangdong , Xinhui
	Q18-S11	2018	QP	Guangdong , Xinhui
	Q18-S12	2018	QP	Guangdong , Xinhui
	Q19-S1	2019	QP	Guangdong , Xinhui
	Q19-S2	2019	QP	Guangdong , Xinhui
	Q19-S3	2019	QP	Guangdong , Xinhui
	Q19-S4	2019	QP	Guangdong , Xinhui
	Q19-S5	2019	QP	Guangdong , Xinhui
	Q19-S6	2019	QP	Guangdong , Xinhui
	Q19-S7	2019	QP	Guangdong , Xinhui
	Q19-S8	2019	QP	Guangdong , Xinhui
	Q19-S9	2019	QP	Guangdong , Xinhui
	Q20-S1	2020	QP	Guangdong , Xinhui
	Q20-S2	2020	QP	Guangdong , Xinhui
	Q20-S3	2020	QP	Guangdong , Xinhui
	Q20-S4	2020	QP	Guangdong , Xinhui
	Q20-S5	2020	QP	Guangdong , Xinhui
	Q20-S6	2020	QP	Guangdong , Xinhui
	Q20-S7	2020	QP	Guangdong , Xinhui
	Q20-S8	2020	QP	Guangdong , Xinhui
	Q21-S1	2021	QP	Guangdong , Xinhui
	Q21-S2	2021	QP	Guangdong , Xinhui

Q21-S3	2021	QP	Guangdong , Xinhui
Q21-S4	2021	QP	Guangdong , Xinhui
Q21-S5	2021	QP	Guangdong , Xinhui
Q21-S6	2021	QP	Guangdong , Xinhui
Q21-S7	2021	QP	Guangdong , Xinhui
E17-S1	2017	EHP	Guangdong , Xinhui
E17-S2	2017	EHP	Guangdong , Xinhui
E17-S3	2017	EHP	Guangdong , Xinhui
E17-S4	2017	EHP	Guangdong , Xinhui
E17-S5	2017	EHP	Guangdong , Xinhui
E17-S6	2017	EHP	Guangdong , Xinhui
E17-S7	2017	EHP	Guangdong , Xinhui
E17-S8	2017	EHP	Guangdong , Xinhui
E17-S9	2017	EHP	Guangdong , Xinhui
E18-S1	2018	EHP	Guangdong , Xinhui
E18-S2	2018	EHP	Guangdong , Xinhui
E18-S3	2018	EHP	Guangdong , Xinhui
E18-S4	2018	EHP	Guangdong , Xinhui
E18-S5	2018	EHP	Guangdong , Xinhui
E18-S6	2018	EHP	Guangdong , Xinhui
E18-S7	2018	EHP	Guangdong , Xinhui
E18-S8	2018	EHP	Guangdong , Xinhui
E18-S9	2018	EHP	Guangdong , Xinhui
E18-S10	2018	EHP	Guangdong , Xinhui
E18-S11	2018	EHP	Guangdong , Xinhui
E18-S12	2018	EHP	Guangdong , Xinhui
E19-S1	2019	EHP	Guangdong , Xinhui
E19-S2	2019	EHP	Guangdong , Xinhui
E19-S3	2019	EHP	Guangdong , Xinhui
E19-S4	2019	EHP	Guangdong , Xinhui
E19-S5	2019	EHP	Guangdong , Xinhui
E19-S6	2019	EHP	Guangdong , Xinhui
E19-S7	2019	EHP	Guangdong , Xinhui
E19-S8	2019	EHP	Guangdong , Xinhui
E19-S9	2019	EHP	Guangdong , Xinhui
E19-S10	2019	EHP	Guangdong , Xinhui
E19-S11	2019	EHP	Guangdong , Xinhui
E19-S12	2019	EHP	Guangdong , Xinhui
E20-S1	2020	EHP	Guangdong , Xinhui
E20-S2	2020	EHP	Guangdong , Xinhui
E20-S3	2020	EHP	Guangdong , Xinhui
E20-S4	2020	EHP	Guangdong , Xinhui
E20-S5	2020	EHP	Guangdong , Xinhui

	E20-S6	2020	EHP	Guangdong , Xinhui
	E20-S7	2020	EHP	Guangdong , Xinhui
	E20-S8	2020	EHP	Guangdong , Xinhui
	E20-S9	2020	EHP	Guangdong , Xinhui
	E20-S10	2020	EHP	Guangdong , Xinhui
	E20-S11	2020	EHP	Guangdong , Xinhui
	E20-S12	2020	EHP	Guangdong , Xinhui
	E21-S1	2021	EHP	Guangdong , Xinhui
	E21-S2	2021	EHP	Guangdong , Xinhui
	E21-S3	2021	EHP	Guangdong , Xinhui
	E21-S4	2021	EHP	Guangdong , Xinhui
	E21-S5	2021	EHP	Guangdong , Xinhui
	E21-S6	2021	EHP	Guangdong , Xinhui
	E21-S7	2021	EHP	Guangdong , Xinhui
	E21-S8	2021	EHP	Guangdong , Xinhui
	E21-S9	2021	EHP	Guangdong , Xinhui
	E21-S10	2021	EHP	Guangdong , Xinhui
	E21-S11	2021	EHP	Guangdong , Xinhui
	E21-S12	2021	EHP	Guangdong , Xinhui
	E21-S13	2021	EHP	Guangdong , Xinhui
	E21-S14	2021	EHP	Guangdong , Xinhui
	E21-S15	2021	EHP	Guangdong , Xinhui
	E21-S16	2021	EHP	Guangdong , Xinhui
	E21-S17	2021	EHP	Guangdong , Xinhui
	E21-S18	2021	EHP	Guangdong , Xinhui
	E21-S19	2021	EHP	Guangdong , Xinhui
	E21-S20	2021	EHP	Guangdong , Xinhui
	E21-S21	2021	EHP	Guangdong , Xinhui
	E21-S22	2021	EHP	Guangdong , Xinhui
	E21-S23	2021	EHP	Guangdong , Xinhui
	E21-S24	2021	EHP	Guangdong , Xinhui
	E21-S25	2021	EHP	Guangdong , Xinhui
	D17-S1	2017	DHP	Guangdong , Xinhui
	D17-S2	2017	DHP	Guangdong , Xinhui
	D17-S3	2017	DHP	Guangdong , Xinhui
	D17-S4	2017	DHP	Guangdong , Xinhui
	D17-S5	2017	DHP	Guangdong , Xinhui
	D17-S6	2017	DHP	Guangdong , Xinhui
	D17-S7	2017	DHP	Guangdong , Xinhui
	D17-S8	2017	DHP	Guangdong , Xinhui
	D17-S9	2017	DHP	Guangdong , Xinhui
	D17-S10	2017	DHP	Guangdong , Xinhui
	D18-S1	2018	DHP	Guangdong , Xinhui

D18-S2	2018	DHP	Guangdong , Xinhui
D18-S3	2018	DHP	Guangdong , Xinhui
D18-S4	2018	DHP	Guangdong , Xinhui
D18-S5	2018	DHP	Guangdong , Xinhui
D18-S6	2018	DHP	Guangdong , Xinhui
D18-S7	2018	DHP	Guangdong , Xinhui
D18-S8	2018	DHP	Guangdong , Xinhui
D18-S9	2018	DHP	Guangdong , Xinhui
D18-S10	2018	DHP	Guangdong , Xinhui
D18-S11	2018	DHP	Guangdong , Xinhui
D18-S12	2018	DHP	Guangdong , Xinhui
D18-S13	2018	DHP	Guangdong , Xinhui
D19-S1	2019	DHP	Guangdong , Xinhui
D19-S2	2019	DHP	Guangdong , Xinhui
D19-S3	2019	DHP	Guangdong , Xinhui
D19-S4	2019	DHP	Guangdong , Xinhui
D19-S5	2019	DHP	Guangdong , Xinhui
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D19-S8	2019	DHP	Guangdong , Xinhui
D19-S9	2019	DHP	Guangdong , Xinhui
D19-S10	2019	DHP	Guangdong , Xinhui
D19-S11	2019	DHP	Guangdong , Xinhui
D19-S12	2019	DHP	Guangdong , Xinhui
D19-S13	2019	DHP	Guangdong , Xinhui
D19-S14	2019	DHP	Guangdong , Xinhui
D19-S15	2019	DHP	Guangdong , Xinhui
D19-S16	2019	DHP	Guangdong , Xinhui
D19-S17	2019	DHP	Guangdong , Xinhui
D20-S1	2020	DHP	Guangdong , Xinhui
D20-S2	2020	DHP	Guangdong , Xinhui
D20-S3	2020	DHP	Guangdong , Xinhui
D20-S4	2020	DHP	Guangdong , Xinhui
D20-S5	2020	DHP	Guangdong , Xinhui
D20-S6	2020	DHP	Guangdong , Xinhui
D20-S7	2020	DHP	Guangdong , Xinhui
D20-S8	2020	DHP	Guangdong , Xinhui
D20-S9	2020	DHP	Guangdong , Xinhui
D20-S10	2020	DHP	Guangdong , Xinhui
D20-S11	2020	DHP	Guangdong , Xinhui
D20-S12	2020	DHP	Guangdong , Xinhui
D20-S13	2020	DHP	Guangdong , Xinhui
D20-S14	2020	DHP	Guangdong , Xinhui

	D21-S1	2021	DHP	Guangdong , Xinhui
	D21-S2	2021	DHP	Guangdong , Xinhui
	D21-S3	2021	DHP	Guangdong , Xinhui
	D21-S4	2021	DHP	Guangdong , Xinhui
	D21-S5	2021	DHP	Guangdong , Xinhui
	D21-S6	2021	DHP	Guangdong , Xinhui
	D21-S7	2021	DHP	Guangdong , Xinhui
	D21-S8	2021	DHP	Guangdong , Xinhui
	D21-S9	2021	DHP	Guangdong , Xinhui
	D21-S10	2021	DHP	Guangdong , Xinhui
	D21-S11	2021	DHP	Guangdong , Xinhui
	D21-S12	2021	DHP	Guangdong , Xinhui
	D21-S13	2021	DHP	Guangdong , Xinhui
	D21-S14	2021	DHP	Guangdong , Xinhui
	D21-S15	2021	DHP	Guangdong , Xinhui
	D21-S16	2021	DHP	Guangdong , Xinhui
	D21-S17	2021	DHP	Guangdong , Xinhui
	D21-S18	2021	DHP	Guangdong , Xinhui
NAPA	QT-S1	2018	Cha Zhi Gan	Guangdong, Jieyang
	QT-S2	2021	Huang Di Gan	Guangdong, Zhaoqing
	QT-S3	2021	Sha Tang Ju	Guangdong, Zhaoqing
	QT-S4	2021	Hong Ju	Sichuan,Chengdu
	QT-S5	2021	Peng Gan	Sichuan,Chengdu
	QT-S6	2021	Cha Zhi Gan	Guangdong , Jieyang
	QT-S7	2021	Jiao Gan	Guangdong , Jieyang
	QT-S8	2021	Mi Gan	Hubei, Yichang
	QT-S9	2021	Ju Zi	Guizhou
	QT-S10	2021	Wu Zi Mi Ju	Yunnan
	QT-S11	2021	Ma Gan	Zhejiang
	QT-S12	2021	Huang Di Gan	Guangxi, Wuming

Table S2 The quality grade assigned by SQFM and Reliability classification table.

Quality grade								
Par.	I	II	III	IV	V	VI	VII	VIII
S_m≥	0.95	0.9	0.85	0.8	0.7	0.6	0.5	≤0.50
P_m%	95~105	90~110	85~115	80~120	70~130	60~140	50~150	0~∞
α≤	0.05	0.1	0.15	0.2	0.3	0.4	0.5	＞0.50
Quality	best	better	good	fine	moderate	common	inferior	defective
Reliability classification table								
Par.	R1	R2	R3	R4	R5	R6	R7	R8
Ui≤	0.05	0.1	0.15	0.2	0.3	0.4	0.5	Ui＞0.50
Ri≥	0.95	0.9	0.85	0.8	0.7	0.6	0.5	Ri＜0.50
Result	extremely reliable	very reliable	reliable	more reliable	moderate	generally	unreliable	very unreliable

Table S3 Regression equations, correlation coefficients (r), linearity, LOD, and LOQ for the five markers.

Components	Regression equation	r	Linearity (g/mL)	LOD(μg·g^{-1})	LOQ(μg·g^{-1})
NARI	Y=0.1323X+0.1222	0.9998	1.84~184	75	248
NAR	Y=0.1441X+0.0678	0.9999	1.42~142	60	181
HES	Y=0.1361X+0.5525	0.9991	3.87~387	160	519
NOB	Y=0.2188X+0.0320	0.9999	2.00~200	80	266
TAN	Y=0.1584X+0.0082	0.9999	0.90~90.0	35	117

Table S4 Results of the evaluation of HPLC, THz-TDs and their synthesis by QRFM.

	HPLC		THz-TDs		HPLC+THz-TDs	
Sample	S_m	P_m%	S_m	P_m%	S_m	P_m%
D17-S1	0.967	95.6	0.967	98.0	0.967	96.8
D17-S2	0.976	84.8	0.982	103.5	0.979	94.2
D17-S3	0.978	102.9	0.929	96.6	0.954	99.8
D17-S4	0.972	92.8	0.954	85.4	0.963	89.1
D17-S5	0.971	71.8	0.969	91.8	0.970	81.8
D17-S6	0.975	80.9	0.985	94.1	0.980	87.5
D17-S7	0.974	95.8	0.952	94.9	0.963	95.4
D17-S8	0.973	99.3	0.963	93.2	0.968	96.3
D17-S9	0.967	111.1	0.967	102.5	0.967	106.8
D17-S10	0.948	107.4	0.964	88.5	0.956	98.0
D18-S1	0.963	55.1	0.928	95.7	0.946	75.4
D18-S2	0.971	97.2	0.935	101.6	0.953	99.4
D18-S3	0.973	92.8	0.959	106.4	0.966	99.6
D18-S4	0.973	88.1	0.973	103.5	0.973	95.8
D18-S5	0.974	66.9	0.974	88.4	0.974	77.7
D18-S6	0.967	79.9	0.972	94.3	0.970	87.1
D18-S7	0.947	71.2	0.982	92.2	0.965	81.7
D18-S8	0.983	90.0	0.964	92.4	0.974	91.2
D18-S9	0.917	64.5	0.965	88.3	0.941	76.4
D18-S10	0.960	72.0	0.972	104.6	0.966	88.3
D18-S11	0.937	88.0	0.968	82.8	0.953	85.4
D18-S12	0.915	83.5	0.974	99.6	0.945	91.6
D18-S13	0.955	81.9	0.974	97.0	0.965	89.5
D19-S1	0.935	122.4	0.968	108.8	0.952	115.6
D19-S2	0.750	81.4	0.949	92.2	0.850	86.8
D19-S3	0.883	90.1	0.946	98.5	0.915	94.3
D19-S4	0.843	90.7	0.952	100.0	0.898	95.4
D19-S5	0.961	103.9	0.977	104.5	0.969	104.2
D19-S6	0.973	80.8	0.945	87.2	0.959	84.0
D19-S7	0.985	89.3	0.939	94.0	0.962	91.7
D19-S8	0.954	141.6	0.951	95.4	0.953	118.5
D19-S9	0.975	77.7	0.948	105.7	0.962	91.7
D19-S10	0.973	92.2	0.973	90.6	0.973	91.4
D19-S11	0.977	96.6	0.972	91.0	0.975	93.8
D19-S12	0.991	89.5	0.960	111.0	0.976	100.3
D19-S13	0.977	101.9	0.968	83.0	0.973	92.5
D19-S14	0.954	80.2	0.948	83.4	0.951	81.8
D19-S15	0.939	106.5	0.969	103.3	0.954	104.9
D19-S16	0.952	68.3	0.964	98.1	0.958	83.2
D19-S17	0.965	112.2	0.956	108.8	0.961	110.5

D20-S1	0.954	132.4	0.940	92.1	0.947	112.3
D20-S2	0.794	72.1	0.947	92.8	0.871	82.5
D20-S3	0.836	99.9	0.920	100.6	0.878	100.3
D20-S4	0.930	95.7	0.957	87.1	0.944	91.4
D20-S5	0.870	92.0	0.932	88.1	0.901	90.1
D20-S6	0.974	125.6	0.965	98.0	0.970	111.8
D20-S7	0.980	87.5	0.922	111.5	0.951	99.5
D20-S8	0.979	97.2	0.939	87.9	0.959	92.6
D20-S9	0.971	111.1	0.954	97.6	0.963	104.4
D20-S10	0.976	85.9	0.834	105.5	0.905	95.7
D20-S11	0.978	121.8	0.969	98.0	0.974	109.9
D20-S12	0.974	133.0	0.973	95.7	0.974	114.4
D20-S13	0.974	112.4	0.967	100.8	0.971	106.6
D20-S14	0.932	86.7	0.974	110.2	0.953	98.5
D21-S1	0.970	86.0	0.950	105.6	0.960	95.8
D21-S2	0.962	86.6	0.928	95.9	0.945	91.3
D21-S3	0.964	73.2	0.960	87.0	0.962	80.1
D21-S4	0.968	75.9	0.978	117.3	0.973	96.6
D21-S5	0.952	96.9	0.965	116.2	0.959	106.6
D21-S6	0.950	98.4	0.908	109.2	0.929	103.8
D21-S7	0.914	73.3	0.944	103.7	0.929	88.5
D21-S8	0.966	90.0	0.967	118.6	0.967	104.3
D21-S9	0.966	117.2	0.959	105.4	0.963	111.3
D21-S10	0.952	68.7	0.950	121.1	0.951	94.9
D21-S11	0.949	93.4	0.951	123.9	0.950	108.7
D21-S12	0.947	78.0	0.953	149.5	0.950	113.8
D21-S13	0.927	76.8	0.966	122.8	0.947	99.8
D21-S14	0.955	80.3	0.937	113.9	0.946	97.1
D21-S15	0.917	94.3	0.929	118.0	0.923	106.2
D21-S16	0.965	118.0	0.962	120.4	0.964	119.2
D21-S17	0.937	75.0	0.936	131.1	0.937	103.1
D21-S18	0.957	74.6	0.974	115.7	0.966	95.2
E17-S1	0.953	112.4	0.986	97.9	0.970	105.2
E17-S2	0.965	106.5	0.978	107.7	0.972	107.1
E17-S3	0.968	119.9	0.947	104.9	0.958	112.4
E17-S4	0.944	79.5	0.965	86.6	0.955	83.1
E17-S5	0.972	84.8	0.976	102.5	0.974	93.7
E17-S6	0.982	98.9	0.975	104.0	0.979	101.5
E17-S7	0.962	93.2	0.980	96.7	0.971	95.0
E17-S8	0.957	80.8	0.976	84.6	0.967	82.7
E17-S9	0.984	94.0	0.952	85.8	0.968	89.9
E18-S1	0.976	121.8	0.912	104.4	0.944	113.1
E18-S2	0.975	111.9	0.965	90.4	0.970	101.2

E18-S3	0.977	109.6	0.953	101.3	0.965	105.5
E18-S4	0.977	111.7	0.956	87.0	0.967	99.4
E18-S5	0.979	103.0	0.956	98.7	0.968	100.9
E18-S6	0.977	103.9	0.947	98.2	0.962	101.1
E18-S7	0.961	89.6	0.965	100.3	0.963	95.0
E18-S8	0.963	91.7	0.950	103.3	0.957	97.5
E18-S9	0.962	86.5	0.958	95.5	0.960	91.0
E18-S10	0.983	108.5	0.988	84.6	0.986	96.6
E18-S11	0.969	112.4	0.977	96.0	0.973	104.2
E18-S12	0.933	62.6	0.972	102.9	0.953	82.8
E19-S1	0.884	103.0	0.954	94.9	0.919	99.0
E19-S2	0.785	105.5	0.968	98.2	0.877	101.9
E19-S3	0.954	72.8	0.966	96.8	0.960	84.8
E19-S4	0.965	89.2	0.986	90.0	0.976	89.6
E19-S5	0.954	179.1	0.972	90.4	0.963	134.8
E19-S6	0.969	123.1	0.955	94.2	0.962	108.7
E19-S7	0.946	90.1	0.956	96.1	0.951	93.1
E19-S8	0.975	81.9	0.977	97.3	0.976	89.6
E19-S9	0.973	93.5	0.960	91.7	0.967	92.6
E19-S10	0.960	113.3	0.989	90.1	0.975	101.7
E19-S11	0.972	101.3	0.985	94.3	0.979	97.8
E19-S12	0.965	97.7	0.963	88.0	0.964	92.9
E20-S1	0.970	123.0	0.963	91.7	0.967	107.4
E20-S2	0.843	113.1	0.956	101.1	0.900	107.1
E20-S3	0.942	93.0	0.965	85.9	0.954	89.5
E20-S4	0.971	109.8	0.944	103.5	0.958	106.7
E20-S5	0.962	99.7	0.972	92.7	0.967	96.2
E20-S6	0.940	156.1	0.957	98.3	0.949	127.2
E20-S7	0.939	103.7	0.949	102.6	0.944	103.2
E20-S8	0.951	67.5	0.979	91.5	0.965	79.5
E20-S9	0.975	108.6	0.977	89.7	0.976	99.2
E20-S10	0.971	79.6	0.973	82.8	0.972	81.2
E20-S11	0.970	98.9	0.984	89.3	0.977	94.1
E20-S12	0.976	160.8	0.954	102.8	0.965	131.8
E21-S1	0.964	103.8	0.948	107.6	0.956	105.7
E21-S2	0.962	87.5	0.944	70.5	0.953	79.0
E21-S3	0.964	68.7	0.956	90.1	0.960	79.4
E21-S4	0.960	104.0	0.954	90.4	0.957	97.2
E21-S5	0.965	86.6	0.965	98.3	0.965	92.5
E21-S6	0.966	89.2	0.926	98.2	0.946	93.7
E21-S7	0.959	102.1	0.935	97.9	0.947	100.0
E21-S8	0.953	87.2	0.971	124.6	0.962	105.9
E21-S9	0.966	92.7	0.956	107.0	0.961	99.9

E21-S10	0.958	99.8	0.909	99.3	0.934	99.6
E21-S11	0.954	77.3	0.966	83.9	0.960	80.6
E21-S12	0.976	112.8	0.958	100.5	0.967	106.7
E21-S13	0.954	89.9	0.951	107.4	0.953	98.7
E21-S14	0.970	93.8	0.955	98.0	0.963	95.9
E21-S15	0.963	97.8	0.961	93.9	0.962	95.9
E21-S16	0.963	105.7	0.930	93.2	0.947	99.5
E21-S17	0.901	139.3	0.986	97.8	0.944	118.6
E21-S18	0.954	105.7	0.940	104.0	0.947	104.9
E21-S19	0.966	110.5	0.972	110.3	0.969	110.4
E21-S20	0.965	96.1	0.954	98.2	0.960	97.2
E21-S21	0.928	72.0	0.952	113.2	0.940	92.6
E21-S22	0.963	82.7	0.922	106.5	0.943	94.6
E21-S23	0.962	87.1	0.974	93.3	0.968	90.2
E21-S24	0.965	88.3	0.940	114.2	0.953	101.3
E21-S25	0.953	93.9	0.962	106.0	0.958	100.0
Q17-S1	0.971	114.0	0.948	98.7	0.960	106.4
Q17-S2	0.972	140.1	0.970	107.1	0.971	123.6
Q17-S3	0.944	106.7	0.963	107.9	0.954	107.3
Q17-S4	0.958	121.1	0.960	101.9	0.959	111.5
Q17-S5	0.961	150.3	0.991	94.8	0.976	122.6
Q17-S6	0.980	105.3	0.987	97.4	0.984	101.4
Q17-S7	0.982	109.7	0.980	92.1	0.981	100.9
Q17-S8	0.947	77.7	0.976	99.9	0.962	88.8
Q17-S9	0.987	98.2	0.955	96.4	0.971	97.3
Q18-S1	0.943	102.7	0.933	99.7	0.938	101.2
Q18-S2	0.966	144.1	0.969	102.8	0.968	123.5
Q18-S3	0.975	104.5	0.975	92.2	0.975	98.4
Q18-S4	0.976	104.6	0.957	98.1	0.967	101.4
Q18-S5	0.963	121.2	0.973	105.5	0.968	113.4
Q18-S6	0.976	109.3	0.970	116.3	0.973	112.8
Q18-S7	0.969	105.4	0.949	96.7	0.959	101.1
Q18-S8	0.965	81.9	0.974	92.0	0.970	87.0
Q18-S9	0.986	107.0	0.935	94.3	0.961	100.7
Q18-S10	0.985	110.6	0.968	92.3	0.977	101.5
Q18-S11	0.973	78.5	0.952	90.7	0.963	84.6
Q18-S12	0.955	77.9	0.977	100.0	0.966	89.0
Q19-S1	0.945	185.4	0.960	109.6	0.953	147.5
Q19-S2	0.972	123.6	0.978	102.4	0.975	113.0
Q19-S3	0.976	119.9	0.954	103.8	0.965	111.9
Q19-S4	0.973	110.3	0.963	104.4	0.968	107.4
Q19-S5	0.979	135.3	0.964	111.3	0.972	123.3
Q19-S6	0.974	126.8	0.977	106.2	0.976	116.5

Q19-S7	0.973	129.1	0.969	82.6	0.971	105.9
Q19-S8	0.963	118.3	0.972	90.2	0.968	104.3
Q19-S9	0.970	118.0	0.958	95.9	0.964	107.0
Q20-S1	0.964	107.0	0.979	112.5	0.972	109.8
Q20-S2	0.973	105.8	0.962	97.5	0.968	101.7
Q20-S3	0.947	119.0	0.984	94.6	0.966	106.8
Q20-S4	0.972	117.5	0.960	102.4	0.966	110.0
Q20-S5	0.970	99.5	0.981	101.6	0.976	100.6
Q20-S6	0.972	98.8	0.906	105.9	0.939	102.4
Q20-S7	0.964	132.2	0.952	97.2	0.958	114.7
Q20-S8	0.974	132.0	0.976	85.2	0.975	108.6
Q21-S1	0.969	94.7	0.943	73.2	0.956	84.0
Q21-S2	0.965	90.6	0.947	95.5	0.956	93.1
Q21-S3	0.955	96.8	0.947	88.8	0.951	92.8
Q21-S4	0.953	112.9	0.961	108.6	0.957	110.8
Q21-S5	0.963	87.2	0.978	122.2	0.971	104.7
Q21-S6	0.965	113.5	0.966	98.3	0.966	105.9
Q21-S7	0.969	86.6	0.936	94.5	0.953	90.6
QT-S1	0.984	102.3	0.935	98.7	0.960	100.5
QT-S2	0.892	136.1	0.964	103.1	0.928	119.6
QT-S3	0.889	125.8	0.974	100.0	0.932	112.9
QT-S4	0.667	180.4	0.926	112.1	0.797	146.3
QT-S5	0.913	202.3	0.933	103.9	0.923	153.1
QT-S6	0.949	65.9	0.965	113.4	0.957	89.7
QT-S7	0.628	111.7	0.931	99.8	0.780	105.8
QT-S8	0.730	305.6	0.972	112.8	0.851	209.2
QT-S9	0.688	248.5	0.965	116.1	0.827	182.3
QT-S10	0.706	221.9	0.963	107.8	0.835	164.9
QT-S11	0.728	181.1	0.942	107.8	0.835	144.5
QT-S12	0.912	175.3	0.926	120.0	0.919	147.7