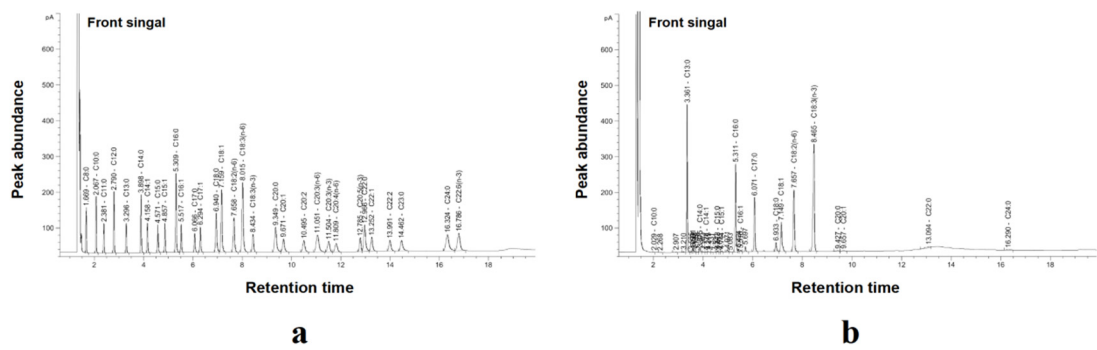


Supplementary Materials



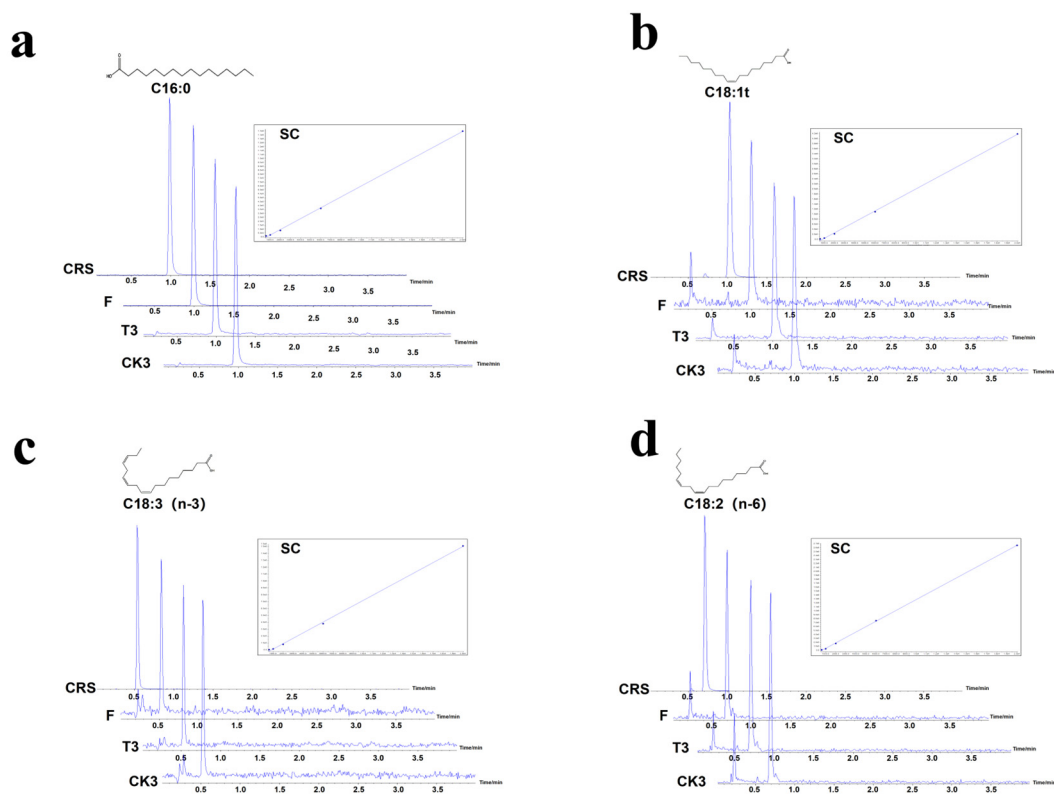


Figure S2. Chromatogram and standard curve of four fatty acids in tea samples during the post-harvest process of oolong tea production production (a) palmitate. (b) trans-9-elaidic acid. (c) α -linolenic acid. (d) linoleic acid; Note: SC: standard curve; CRS: Chemical reference substance; F: fresh leaves; T3: turn-over leaves; CK3: indoor-withered leaves

Table S1. The information of 37 types of fatty acid methyl esters mixed referencing standards

Name	Types	Concentration	CAS
Methyl butyrate	C4:0	400 µg/mL	623-42-7
Methyl hexanoate	C6:0	400 µg/mL	106-70-7
Methyl octanoate	C8:0	400 µg/mL	111-11-5
Methyl decanoate	C10:0	400 µg/mL	110-42-9
Methyl undecanoate	C11:0	200 µg/mL	1731-86-8
Methyl laurate	C12:0	400 µg/mL	29972-79-0
Methyl tridecanoate	C13:0	200 µg/mL	1731-88-0
Methyl myristate	C14:0	400 µg/mL	124-10-7
Methyl myristoleate	C14:1	200 µg/mL	56219-06-8
Methyl pentadecanoate	C15:0	200 µg/mL	7132-64-1
Methyl cis-10-pentadecenoate	C15:1	200 µg/mL	7132-64-1
Methyl palmitate	C16:0	600 µg/mL	90176-52-6
Methyl palmitoleate	C16:1	200 µg/mL	1120-25-8
Methyl heptadecanoate	C17:0	200 µg/mL	1731-92-6
cis-10-Heptadecanoic acid methyl ester	C17:1	200 µg/mL	75190-82-8
Methyl stearate	C18:0	400 µg/mL	112-61-8
trans-9-Elaidic acid methyl ester	C18:1t	200 µg/mL	2462-84-2
cis-9-Oleic acid methyl ester	C18:1c	400 µg/mL	112-62-9
Methyl linolelaidate	C18:2(n-6t)	200 µg/mL	2566-97-4
Methyl linoleate	C18:2(n-6c)	200 µg/mL	112-63-0
Methyl arachidate	C20:0	400 µg/mL	1120-28-1
Methyl γ-linolenate	γ-C18:3	200 µg/mL	7361-80-0
Methyl cis-11-eicosenoate	C20:1 (n-9)	200 µg/mL	2390-09-2
Methyl linolenate	α-C18:3	200 µg/mL	7361-80-0
Methyl heneicosanoate	C21:0	200 µg/mL	6064-90-0
cis-11,14-Eicosadienoic acid methyl ester	C20:2	200 µg/mL	61012-46-2
Methyl behenate	C22:0	400 µg/mL	929-77-1
cis-8,11,14-Eicosatrienoic acid methyl ester	C20:3(n-6)	200 µg/mL	21061-10-9
Methyl erucate	C22:1	200 µg/mL	1120-34-9
cis-11,14,17-Eicosatrienoic acid methyl ester	C20:3(n-3)	200 µg/mL	55682-88-7
cis-5,8,11,14-Eicosatetraenoic acid methyl ester	C20:4	200 µg/mL	2566-89-4
Methyl tricosanoate	C23:0	200 µg/mL	2433-97-8
cis-13,16-Docosadienoic acid methyl ester	C22:2	200 µg/mL	61012-47-3
Methyl lignocerate	C24:0	400 µg/mL	2442-49-1
cis-5,8,11,14,17-Eicosapentaenoic acid methyl ester	C20:5 (n-3)	200 µg/mL	2734-47-6
Methyl nervonate	C24:1	200 µg/mL	2733-88-2
cis-4,7,10,13,16,19-Docosahexaenoic acid methyl ester	C22:6 (n-3)	200 µg/mL	301-01-9

Note: “m” and “n” indexes of C_m:_n represent the number of carbon atoms and unsaturated double bonds in the fatty acid carbon chain, respectively. (n-3), (n-6) and (n-9) indicate that the first double bond of fatty acid starting from the methyl end is between 3 and 4, 6 and 7, 9 and 10, respectively. c, t represent the *cis*- and *trans*- conformations of fatty acids, respectively.

Table S2. Mass spectrometry parameters of four fatty acids

Fatty acid	Product ion (m/z)	Daughter ion (m/z)	DP (V)	CE(V)	CXP(V)
Palmitate	301.1	255.0	-28	-10	-9
(C16:0)	301.1	45	-28.7	-21	-4
trans-9-Elaidic acid	327.1	281.1	-36	-11	-6
(C18:1t)	327.1	45.0	-34	-32	-5
α -linolenic acid	323.0	277.1	-26	-10	-6
(C18:3 (n-3))			-33	-29	-6
linoleic acid	325.2	279.1	-31	-10	-6
(C18:2 (n-6))		45.1	-30	-30	-4.3

DP: declustering potential; CE: collision energy; CXP: collision cell exit potential