

Occurrence of Alk(en)ylresorcinols in the Fruits of Two Mango (*Mangifera indica* L.) Cultivars during On-Tree Maturation and Postharvest Storage

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SUPPORTING INFORMATION

The alk(en)ylresorcinols were specified for both the peel and the mesocarp of ‘Nam Dokmai #4’ and ‘Chok Anan’ mango fruits as a function of the harvest time, the maturity stage at harvest, and the postharvest quality and ripeness during cold fruit storage, respectively. Tables 6 and 7 of the main document show the average values of the total alk(en)ylresorcinol contents and the homologue profiles, respectively, which were observed throughout storage for each cultivar. In addition, the present supporting information includes two supplemental tables with the total alk(en)ylresorcinol contents and the homologue profiles of each variant on individual storage days.

Page II:

Table S1. Total alk(en)ylresorcinol contents in both the peel ($c_{AR,p}$) and the mesocarp ($c_{AR,m}$) of ‘Nam Dokmai #4’ mango fruits (variants N1A–N5C; cf. **Figure 1A** of the main document) on the days (D) 1, 10±1, and 18±1 of fruit storage (14 °C), respectively ($n = 33$ samples), including the percentages of individual homologues (1, 3–5, 8; cf. **Table 1** and **Figure 2C/D** of the main document).

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Table S2. Total alk(en)ylresorcinol contents in both the peel ($c_{AR,p}$) and the mesocarp ($c_{AR,m}$) of ‘Chok Anan’ mango fruits (variants C1A–C5C; cf. **Figure 1B** of the main document) on the days (D) 1, 9, 18±1, and 27 of fruit storage (14 °C), respectively ($n = 48$ samples), including the percentages of individual homologues (1–8; cf. **Table 1** and **Figure 2A/B** of the main document).

Table S1. Total Alk(en)ylresorcinol Contents^a in both the Peel ($C_{AR,p}$) and the Mesocarp ($C_{AR,m}$) of ‘Nam Dokmai #4’ Mango Fruits (Variants N1A–N5C; cf. **Figure 1A** of the Main Document) on the Days (D) 1, 10±1, and 18±1 of Fruit Storage (14 °C), Respectively ($n = 33$ Samples), Including the Percentages of Individual Homologues (1, 3–5, 8; cf. **Table 1** and **Figure 2C/D** of the Main Document).

Fruit variant	D	RPI _{KS} ³² []	TSS/TA ³² []	$C_{AR,p}$ [mg hg ⁻¹]	$C_{AR,m}$ [mg hg ⁻¹]	Homologue percentages of the total alk(en)ylresorcinol content [%]						
						Peel					Mesocarp	
						C _{15:0}	C _{17:1}	C _{17:2}	C _{17:3}	C _{19:1}	C _{17:1}	C _{17:2}
						4	5	3	1	8	5	3
N1A	1	11.0	9	9.0 ± 0.4 ^{b-c}	1.0 ± 0.1 ^{e-k}	7.5	55.2	31.8	2.2	3.3	67.1	32.9
	10±1	10.4	11	5.7 ± 0.2 ^{h-l}	1.7 ± 0.1 ^a	9.0	58.4	29.9	1.0	1.8	65.2	34.8
	18±1	7.6	30	5.4 ± 0.4 ^{h-m}	0.4 ± 0.03 ^{no}	7.5	57.7	31.0	1.4	2.4	62.5	37.5
N1B	1	11.1	9	8.4 ± 0.3 ^{c-e}	0.8 ± 0.02 ^{g-n}	7.4	56.1	31.3	2.5	2.7	65.0	35.0
	10±1	10.6	12	5.9 ± 0.3 ^{g-l}	0.9 ± 0.1 ^{e-l}	7.8	59.9	32.3	tr	tr	66.2	33.8
	18±1	7.5	63	7.0 ± 0.1 ^{e-i}	0.7 ± 0.01 ^{i-o}	7.5	56.1	31.3	2.4	2.7	68.1	31.9
N2A	1	10.5	16	8.6 ± 0.7 ^{b-e}	0.9 ± 0.1 ^{e-k}	7.2	56.8	30.0	2.3	3.7	67.0	33.0
	10±1	10.6	11	5.7 ± 0.2 ^{h-l}	0.9 ± 0.1 ^{e-k}	9.4	50.3	26.2	2.7	11.4	65.6	34.4
	18±1	6.7	48	6.4 ± 0.5 ^{f-k}	1.6 ± 0.1 ^{a-c}	8.6	55.7	28.9	3.8	3.1	66.6	33.4
N2B	1	10.3	20	11.4 ± 0.3 ^a	0.8 ± 0.05 ^{h-o}	8.1	55.1	29.3	3.2	4.4	69.3	30.7
	10±1	9.6	14	3.6 ± 0.1 ^{n-p}	1.5 ± 0.1 ^{a-d}	9.2	56.7	28.2	2.6	3.4	66.3	33.7
	18±1	7.3	55	6.6 ± 0.4 ^{f-j}	0.5 ± 0.02 ^{m-o}	8.3	54.9	30.9	2.5	3.4	73.8	26.2
N3A	1	10.9	11	7.6 ± 0.4 ^{d-g}	0.8 ± 0.1 ^{f-m}	7.6	56.7	29.5	2.5	3.7	66.3	33.7
	10±1	10.4	21	6.4 ± 0.3 ^{f-k}	0.6 ± 0.02 ^{i-o}	7.1	56.7	29.3	3.1	3.8	69.8	30.2
	18±1	6.1	55	6.3 ± 0.2 ^{f-k}	1.2 ± 0.1 ^{c-g}	7.9	57.7	28.6	tr	5.8	64.1	35.9
N3B	1	10.9	11	4.9 ± 0.3 ^{j-o}	1.1 ± 0.01 ^{d-h}	8.0	58.2	31.7	1.1	1.0	65.0	35.0
	10±1	9.6	25	5.7 ± 0.2 ^{h-l}	0.6 ± 0.1 ^{k-o}	8.0	56.7	29.8	2.8	2.8	80.8	19.2
	18±1	5.5	102	3.9 ± 0.3 ^{m-p}	1.2 ± 0.1 ^{b-f}	8.2	56.2	30.6	2.0	3.1	62.9	37.1
N3C	1	10.5	15	6.6 ± 0.1 ^{f-j}	1.0 ± 0.1 ^{e-j}	8.3	55.2	29.5	2.4	4.5	66.8	33.2
	10±1	9.4	44	7.2 ± 0.2 ^{e-h}	0.6 ± 0.1 ^{j-o}	7.3	56.1	30.6	2.3	3.6	70.2	29.8
	18±1	4.9	127	4.6 ± 0.1 ^{k-o}	0.7 ± 0.02 ^{i-o}	9.0	59.0	32.0	tr	tr	65.3	34.7
N4B	1	10.7	14	3.3 ± 0.04 ^{o-p}	0.7 ± 0.1 ^{h-o}	7.8	60.3	31.3	tr	0.6	62.7	37.3
	10±1	9.5	34	10.4 ± 0.5 ^{ab}	0.4 ± 0.1 ^o	7.0	56.2	30.8	2.4	3.6	71.0	29.0
	18±1	3.5	335	9.8 ± 0.4 ^{a-c}	0.8 ± 0.03 ^{g-n}	6.8	57.2	31.0	2.7	2.3	66.4	33.6
N4C	1	10.5	15	6.0 ± 0.5 ^{g-l}	0.6 ± 0.02 ^{j-o}	7.5	55.1	29.5	1.0	6.9	69.5	30.5
	10±1	9.0	16	7.0 ± 0.1 ^{e-h}	0.9 ± 0.1 ^{e-k}	8.1	55.2	30.6	3.4	2.7	67.3	32.7
	18±1	4.1	204	7.8 ± 0.2 ^{d-f}	0.7 ± 0.04 ^{h-o}	7.6	56.9	30.1	2.9	2.6	71.5	28.5
N5B	1	10.3	17	5.4 ± 0.1 ^{h-n}	1.3 ± 0.1 ^{b-e}	8.5	53.0	27.7	2.3	8.5	63.2	36.8
	10±1	7.0	47	4.8 ± 0.4 ^{j-o}	0.4 ± 0.02 ^{no}	8.0	55.3	28.9	5.8	2.0	65.1	34.9
	18±1	3.7	282	2.8 ± 0.02 ^p	0.7 ± 0.1 ^{j-o}	10.7	61.6	27.7	tr	tr	68.5	31.5
N5C	1	8.1	19	6.5 ± 0.03 ^{f-j}	1.6 ± 0.2 ^{ab}	7.1	56.1	29.7	2.4	4.6	67.4	32.6
	10±1	6.4	53	5.2 ± 0.1 ⁱ⁻ⁿ	1.1 ± 0.03 ^{e-i}	8.9	53.1	26.4	3.4	8.1	66.6	33.4
	18±1	3.4	380	4.3 ± 0.01 ^{l-p}	0.5 ± 0.002 ^{h-n}	7.6	56.8	28.7	4.6	2.3	65.7	34.3
Column mean		8.4	64	6.4	0.9	8.0	56.4	29.8	2.2	3.5	67.2	32.8
Column SD				2.0	0.4	0.8	2.1	1.5	1.3	2.5	3.6	3.6
Column Min		3.4	9	2.8	0.4	6.8	50.3	26.2	tr	tr	62.5	19.2
Column Max		11.1	380	11.4	1.7	10.7	61.6	32.3	5.8	11.4	80.8	37.5

^a Mean ± standard error (mg hg⁻¹ of DW). Values with different superscript letters vertically (a–p) were significantly different due to the harvest time (N1–N5), the category (A–C), and the storage time (1 – 18±1 days) ($P \leq 0.05$).

DW, dry weight; RPI_{KS}, postharvest ripeness index (values as reported by Kienzle et al., 2012);³² TSS/TA, sugar/acid ratio (values as reported by Kienzle et al., 2012);³² tr, traces; SD, standard deviation; Min, minimum; Max, maximum.

Table S2. Total Alk(en)ylresorcinol Contents^a in both the Peel ($C_{AR,p}$) and the Mesocarp ($C_{AR,m}$) of ‘Chok Anan’ Mango Fruits (Variants C1A–C5C; cf. **Figure 1B** of the Main Document) on the Days (D) 1, 9, 18±1, and 27 of Fruit Storage (14 °C), Respectively ($n = 48$ Samples), Including the Percentages of Individual Homologues (1–8; cf. **Table 1** and **Figure 2A/B** of the Main Document).

Fruit variant	D	RPI _{KS} ³¹ []	TSS/TA ³¹ []	$C_{AR,p}$ [mg hg ⁻¹]	$C_{AR,m}$ [mg hg ⁻¹]	Homologue percentages of the total alk(en)ylresorcinol content [%]											
						Peel								Mesocarp			
						C15:0	C15:1	C17:0	C17:1	C17:2	C17:3	C19:1	C19:2	C15:0	C17:1	C17:2	
						4	2	7	5	3	1	8	6	4	5	3	
C1A	1	11.0	13	74.5 ± 0.3 ^{h-n}	5.5 ± 0.1 ^{i-q}	10.3	0.8	0.5	55.5	28.8	2.8	0.8	0.5	9.2	61.9	28.9	
	9	10.7	14	99.6 ± 1.6 ^{a-c}	6.4 ± 0.1 ⁱ⁻ⁿ	10.9	0.9	0.6	55.0	28.1	3.0	1.0	0.6	9.3	62.4	28.4	
	18±1	8.1	48	77.8 ± 0.03 ^{g-m}	7.2 ± 0.4 ^{f-l}	10.0	0.9	0.4	55.6	28.7	2.8	0.9	0.6	7.9	60.8	31.3	
	27	5.3	153	109.6 ± 0.6 ^a	12.8 ± 0.9 ^a	10.4	0.9	0.5	54.7	29.0	3.0	0.9	0.6	8.6	61.4	30.0	
C1B	1	11.2	11	74.7 ± 1.6 ^{h-n}	7.6 ± 0.3 ^{e-k}	11.6	0.9	0.7	54.3	28.2	2.7	1.0	0.5	8.4	62.9	28.7	
	9	10.8	14	69.2 ± 2.8 ^{k-p}	7.6 ± 0.5 ^{e-k}	9.7	0.9	0.4	56.1	28.8	2.5	1.0	0.5	8.5	61.7	29.8	
	18±1	7.9	75	46.6 ± 1.7 ^v	7.4 ± 0.6 ^{e-l}	9.7	0.9	0.3	56.5	29.3	2.6	0.5	0.2	7.5	62.4	30.1	
	27	5.5	138	68.5 ± 0.7 ^{i-q}	8.6 ± 0.03 ^{d-i}	10.4	1.0	0.5	55.7	28.7	2.7	0.6	0.4	8.3	63.5	28.2	
C2A	1	11.1	13	67.1 ± 2.3 ^{m-r}	5.5 ± 0.02 ^{j-q}	10.9	1.0	0.4	53.4	29.8	3.2	0.7	0.6	10.0	59.1	30.9	
	9	10.4	14	84.2 ± 0.6 ^{e-h}	2.2 ± 0.2 ^u	11.4	1.0	0.5	54.2	28.5	2.9	0.9	0.6	12.0	59.4	28.6	
	18±1	8.4	36	62.4 ± 2.6 ^{p-s}	2.4 ± 0.03 ^{tu}	13.0	1.0	0.6	51.8	29.2	3.3	0.6	0.4	12.2	59.9	27.9	
	27	5.1	151	83.4 ± 1.8 ^{e-i}	2.4 ± 0.1 ^{tu}	11.8	0.9	0.5	53.4	29.0	3.0	0.9	0.6	13.5	58.4	28.1	
C2B	1	11.0	14	73.4 ± 4.6 ^{i-o}	7.8 ± 0.1 ^{e-j}	11.5	1.0	0.5	54.4	28.2	2.9	0.8	0.6	11.0	60.2	28.8	
	9	9.3	20	47.7 ± 1.3 ^{uv}	3.1 ± 0.2 ^{q-u}	12.5	0.9	0.4	53.3	28.8	2.9	0.6	0.7	11.1	57.9	30.9	
	18±1	6.6	56	57.6 ± 1.0 ^{r-u}	4.0 ± 0.03 ^{o-u}	13.1	1.1	0.3	52.2	29.0	3.1	0.7	0.4	14.6	56.4	28.9	
	27	5.0	147	67.0 ± 1.7 ^{n-r}	4.4 ± 0.9 ^{n-t}	12.8	1.0	0.5	52.0	29.3	3.0	0.8	0.5	10.9	60.1	29.0	
C2C	1	10.7	18	61.3 ± 2.3 ^{p-t}	7.8 ± 0.5 ^{e-j}	12.6	1.0	0.6	53.3	28.0	3.4	0.9	0.3	10.1	61.4	28.5	
	9	8.5	44	44.9 ± 1.7 ^v	3.0 ± 0.1 ^{r-u}	12.2	1.1	0.2	53.5	28.7	3.0	0.6	0.6	11.7	58.6	29.7	
	18±1	7.7	83	65.3 ± 1.2 ^{n-r}	2.7 ± 0.1 ^{s-u}	11.7	1.1	0.5	53.6	28.7	3.2	0.7	0.5	11.7	60.0	28.3	
	27	4.7	186	66.0 ± 0.8 ^{n-r}	7.0 ± 0.1 ^{f-m}	13.1	0.9	0.4	54.0	27.5	2.9	0.8	0.5	15.2	58.2	26.7	
C3A	1	10.7	21	84.1 ± 2.9 ^{e-i}	9.0 ± 0.5 ^{c-g}	9.9	1.2	0.4	54.8	29.3	2.9	1.0	0.6	9.9	60.3	29.7	
	9	10.5	27	78.8 ± 0.6 ^{g-l}	7.6 ± 0.5 ^{e-j}	10.9	0.9	0.4	53.9	29.7	2.9	0.7	0.6	9.5	60.5	30.0	
	18±1	6.3	62	70.5 ± 3.6 ^{j-p}	6.1 ± 0.1 ^{j-o}	11.4	0.9	0.7	54.6	28.5	2.8	0.6	0.5	9.1	61.9	29.0	
	27	4.3	259	88.6 ± 0.5 ^{d-g}	5.7 ± 0.4 ^{j-p}	9.9	0.9	0.5	55.1	29.5	2.7	0.9	0.6	9.0	60.7	30.3	
C3B	1	10.8	18	74.3 ± 1.9 ^{h-n}	5.7 ± 0.2 ^{j-p}	9.9	0.8	0.5	55.7	28.8	2.8	1.0	0.6	10.4	60.5	29.1	
	9	10.1	22	66.5 ± 0.8 ^{n-r}	9.1 ± 1.0 ^{c-f}	10.9	0.9	0.5	54.5	29.0	2.8	0.8	0.5	8.9	61.4	29.6	
	18±1	7.4	61	105.2 ± 1.3 ^{ab}	6.6 ± 0.6 ^{g-n}	10.0	0.9	0.5	54.5	29.8	2.8	0.9	0.6	9.2	59.9	30.9	
	27	4.7	199	66.8 ± 3.0 ^{n-r}	6.5 ± 0.03 ^{h-n}	10.8	0.9	0.4	54.1	30.0	2.7	0.7	0.4	10.3	59.7	30.0	
C3C	1	10.7	20	88.4 ± 0.8 ^{d-g}	8.9 ± 0.4 ^{c-h}	10.4	1.1	0.6	54.9	28.7	2.7	1.0	0.6	10.0	60.2	29.8	
	9	8.9	32	69.9 ± 0.1 ^{j-p}	9.1 ± 0.6 ^{c-f}	10.4	0.9	0.6	55.2	28.8	2.4	1.3	0.3	9.2	61.5	29.3	
	18±1	5.5	127	52.6 ± 1.1 ^{s-v}	5.0 ± 0.1 ^{h-s}	11.2	1.1	0.3	54.3	29.2	2.9	0.5	0.5	8.3	60.9	30.8	
	27	4.3	257	53.8 ± 1.1 ^{s-v}	5.5 ± 0.1 ^{j-q}	9.9	1.0	0.3	56.2	29.1	2.6	0.5	0.4	9.2	61.5	29.2	
C4B	1	10.5	20	88.0 ± 2.8 ^{d-g}	9.8 ± 0.5 ^{b-e}	10.8	0.9	0.7	54.0	29.2	2.9	0.9	0.6	9.7	60.5	29.7	
	9	9.7	24	70.1 ± 0.7 ^{j-p}	11.7 ± 0.6 ^{a-c}	10.6	1.0	0.4	55.4	28.7	2.8	0.7	0.4	8.1	62.5	29.3	
	18±1	6.8	77	80.4 ± 1.4 ^{f-j}	7.7 ± 0.1 ^{e-j}	10.0	1.0	0.4	54.2	29.5	3.0	1.4	0.6	8.9	61.5	29.6	
	27	4.7	213	79.6 ± 1.9 ^{g-k}	4.7 ± 0.1 ^{m-t}	10.9	0.9	0.5	53.6	29.8	2.9	0.8	0.6	9.3	61.1	29.7	
C4C	1	10.1	31	69.3 ± 1.4 ^{k-p}	9.8 ± 0.3 ^{b-e}	10.9	0.9	0.3	54.4	29.2	3.0	0.9	0.5	9.6	61.3	29.1	
	9	8.2	43	72.0 ± 1.7 ^{j-p}	11.1 ± 0.2 ^{a-c}	11.2	1.0	0.4	54.2	28.8	2.9	0.8	0.6	7.7	62.9	29.4	
	18±1	5.1	161	88.0 ± 2.9 ^{d-g}	7.8 ± 0.1 ^{e-j}	10.1	0.9	0.7	55.3	28.5	2.8	1.2	0.6	9.4	61.4	29.3	
	27	4.8	220	96.4 ± 0.9 ^{b-d}	3.7 ± 0.2 ^{o-u}	10.9	0.9	0.5	54.6	28.8	2.8	0.8	0.6	11.4	59.8	28.8	
C5B	1	10.8	17	50.6 ± 1.4 ^{t-v}	7.2 ± 0.1 ^{f-l}	10.8	1.1	0.3	54.7	28.9	3.1	0.7	0.4	8.2	62.9	28.9	
	9	10.5	18	74.5 ± 1.2 ^{h-n}	5.9 ± 0.1 ^{j-o}	11.3	1.0	0.6	54.4	28.2	3.0	1.0	0.5	10.5	60.6	28.9	
	18±1	6.3	78	78.7 ± 1.7 ^{g-l}	3.3 ± 0.1 ^{p-u}	10.4	0.9	0.5	54.6	29.2	2.9	0.9	0.6	9.1	62.2	28.7	
	27	4.7	197	92.2 ± 1.2 ^{c-e}	9.0 ± 0.9 ^{c-g}	9.8	0.9	0.5	56.5	28.0	2.8	0.9	0.6	9.2	62.3	28.5	
C5C	1	10.2	20	58.4 ± 1.9 ^{q-u}	5.7 ± 0.7 ^{j-p}	10.4	0.9	0.3	55.3	29.2	2.7	0.7	0.5	9.1	62.1	28.8	
	9	9.6	31	46.2 ± 1.6 ^v	10.5 ± 0.4 ^{a-d}	12.0	1.0	0.5	53.5	27.8	2.8	1.6	0.6	10.2	59.2	30.6	
	18±1	5.7	101	63.3 ± 1.2 ^{o-s}	5.2 ± 0.04 ^{k-r}	11.1	1.0	0.4	54.5	28.7	2.8	1.1	0.4	8.2	63.0	28.8	
	27	4.6	201	91.2 ± 1.6 ^{c-f}	9.9 ± 0.4 ^{b-e}	10.9	0.9	0.6	53.9	29.3	3.0	0.9	0.6	9.7	60.5	29.8	
Column mean		8.0	79	72.9	6.7	11.0	1.0	0.5	54.4	28.9	2.9	0.9	0.5	9.9	60.8	29.3	
Column SD				15.4	2.6	0.9	0.1	0.1	1.0	0.5	0.2	0.2	0.1	1.7	1.5	0.9	
Column Min		4.3	11	44.9	2.2	9.7	0.8	0.2	51.8	27.5	2.4	0.5	0.2	7.5	56.4	26.7	
Column Max		11.2	259	109.6	12.8	13.1	1.2	0.7	56.5	30.0	3.4	1.6	0.7	15.2	63.5	31.3	

^a Mean ± standard error (mg hg⁻¹ of DW). Values with different superscript letters vertically (a–v) were significantly different due to the harvest time (C1–C5), the category (A–C), and the storage time (1–27 days) ($P \leq 0.05$).

DW, dry weight; RPI_{KS}, postharvest ripeness index (values as reported by Kienzle et al., 2011);³¹ TSS/TA, sugar/acid ratio (values as reported by Kienzle et al., 2011);³¹ SD, standard deviation; Min, minimum; Max, maximum.