Table S1. Physico-chemical characterization (means ±standard deviation) of the 36 grapefruit-like beverages.

No	Sample code [2]	Brix	TA [%]	Brix/TA Ratio	Sucrose g/100 g	Fructose g/100 g	Glucose g/100 g	L	a	b
1	LMHR	10.80b (0.01)	1.26cd (0.01)	8.75b (0.05)	1.54cd (0.03)	4.20b (0.11)	2.75a (0.13)	25.20ijkl (0.02)	2.28bc (0.01)	-0.26 l (0.03)
2	MMHR	10.79b (0.02)	1.26cd (0.01)	8.77b (0.07)	1.52cd (0.00)	4.44ab (0.06)	2.82a (0.01)	24.87lmn (0.05)	2.17def (0.06)	-0.23ijkl (0.02)
3	HMHR	10.81b (0.02)	1.27bc (0.01)	8.74b (0.04)	1.46d (0.02)	4.43ab (0.08)	2.87a (0.01)	24.63n (0.07)	1.84jk (0.01)	-0.43o (0.01)
4	LHHR	12.74a (0.01)	1.23e (0.01)	10.58a (0.05)	3.52b (0.07)	4.31ab (0.01)	2.72a (0.04)	25.16ijklm (0.03)	2.43a (0.06)	-0.09fg (0.00)
5	MHHR	12.80a (0.04)	1.23e (0.07)	10.91a (0.64)	3.67ab (0.25)	4.36ab (0.28)	2.83a (0.13)	25.13jklm (0.03)	2.19cde (0.04)	-0.26l (0.02)
6	HHHR	12.80a (0.03)	1.23e (0.01)	10.57a (0.06)	3.62ab (0.03)	4.33ab (0.14)	2.79a (0.02)	24.81mn (0.20)	2.02gh (0.04)	-0.36mno (0.03)
7	LLHR	8.83c (0.01)	1.29a (0.01)	7.03c (0.04)	0.00e (0.00)	4.46ab (0.15)	2.84a (0.01)	24.95klmn (0.95)	2.59a (0.27)	-0.17hij (0.04)
8	MLHR	8.83c (0.00)	1.29a (0.01)	7.03c (0.03)	0.00e (0.00)	4.42ab (0.12)	2.79a (0.09)	25.15ijklm (0.31)	2.17def (0.03)	-0.24jkl (0.03)
9	HLHR	8.78c (0.05)	1.29a (0.01)	7.01c (0.09)	0.00e (0.00)	4.45ab (0.11)	2.82a (0.01)	25.35ghij (0.06)	1.97hi (0.03)	-0.38no (0.02)
10	LMLR	10.78b (0.06)	1.26cd (0.00)	8.76b (0.05)	1.63cd (0.06)	4.35ab (0.07)	2.78a (0.03)	25.15ijklm (0.30)	2.25bcd (0.07)	-0.14gh (0.07)
11	MMLR	10.76b (0.04)	1.25cd (0.08)	8.78b (0.81)	1.63cd (0.01)	4.41ab (0.04)	2.79a (0.04)	25.34ghij (0.02)	2.16def (0.02)	-0.25kl (0.01)
12	HMLR	10.77b (0.03)	1.26cd (0.00)	8.75b (0.03)	1.63cd (0.03)	4.35ab (0.07)	2.80a (0.12)	25.15ijklm (0.01)	1.81k (0.04)	-0.43no (0.02)
13	LHLR	12.73a (0.01)	1.23e (0.00)	10.54a (0.01)	3.71ab (0.01)	4.31ab (0.01)	2.79a (0.06)	25.51ghi (0.02)	2.31b (0.01)	-0.15ghi (0.01)
14	MHLR	12.92a (0.24)	1.23e (0.00)	10.54a (0.20)	3.74ab (0.49)	4.35ab (0.50)	2.81a (0.33)	25.42ghij (0.01)	2.12efg (0.05)	-0.27l (0.02)
15	HHLR	12.71a (0.03)	1.23e (0.00)	10.53a (0.02)	3.71ab (0.01)	4.27ab (0.02)	2.80a (0.03)	25.32ghij (0.05)	1.91ijk (0.02)	-0.39no (0.01)
16	LLLR	8.79c (0.03)	1.29a (0.01)	7.03c (0.04)	0.00e (0.00)	4.50ab (0.17)	2.83a (0.06)	25.57gh (0.04)	2.08fg (0.04)	-0.28lm (0.02)
17	MLLR	8.83c (0.02)	1.29a (0.01)	7.06c (0.04)	0.00e (0.00)	4.44ab (0.12)	2.81a (0.07)	25.23hijkl (0.07)	1.92ij (0.04)	-0.37no (0.02)
18	HLLR	8.78c (0.01)	1.29a (0.01)	7.03c (0.04)	0.00e (0.00)	4.35ab (0.02)	2.76a (0.04)	25.29hijk (0.02)	1.95hi (0.03)	-0.35mn (0.03)
19	LMHY	10.79b (0.00)	1.26cd (0.00)	8.77b (0.00)	1.63cd (0.05)	4.40ab (0.21)	2.76a (0.08)	26.60abc (0.06)	-0.20pqrs (0.03)	0.41ab (0.02)
20	MMHY	10.77b (0.01)	1.26cd (0.00)	8.75b (0.01)	1.64cd (0.31)	4.28ab (0.60)	2.76a (0.36)	26.59abc (0.01)	-0.23rs (0.02)	0.39abc (0.01)
21	HMHY	10.72b (0.05)	1.25cd (0.01)	8.76b (0.07)	1.64cd (0.00)	4.43ab (0.03)	2.81a (0.05)	26.19de (0.06)	-0.08m (0.01)	0.16e (0.01)
22	LHHY	12.77a (0.02)	1.23e (0.00)	10.58a (0.02)	3.67ab (0.11)	4.37ab (0.05)	2.75a (0.05)	26.63abc (0.06)	-0.25rs (0.01)	0.46a (0.02)
23	MHHY	12.76a (0.03)	1.23e (0.00)	10.57a (0.03)	3.79a (0.09)	4.36ab (0.07)	2.78a (0.01)	26.26cde (0.06)	-0.10mno (0.02)	0.20e (0.02)
24	HHHY	12.75a (0.06)	1.23e (0.00)	10.56a (0.05)	3.70ab (0.06)	4.30ab (0.07)	2.77a (0.02)	26.29bcde (0.06)	-0.10mnop (0.01)	0.20e (0.02)
25	LLHY	8.81c (0.02)	1.29a (0.01)	7.05c (0.04)	0.00e (0.00)	4.44ab (0.10)	2.82a (0.02)	26.59abc (0.04)	-0.22rs (0.04)	0.38abc (0.03)
26	MLHY	8.82c (0.01)	1.29a (0.00)	7.04c (0.01)	0.00e (0.00)	4.33ab (0.15)	2.75a (0.06)	26.38abcd (0.05)	-0.16mnopqr (0.02)	0.29d (0.02)
27	HLHY	8.73c (0.10)	1.28ab (0.00)	7.02c (0.08)	0.00e (0.00)	4.52ab (0.03)	2.84a (0.04)	25.99ef (0.02)	0.02l (0.04)	-0.04f (0.01)
28	LMLY	10.81b (0.01)	1.26cd (0.00)	8.79b (0.00)	1.71c (0.08)	4.54a (0.04)	2.86a (0.05)	26.69a (0.08)	-0.23rs (0.03)	0.43a (0.04)
29	MMLY	10.78b (0.02)	1.25d (0.00)	8.83b (0.01)	1.62cd (0.06)	4.49ab (0.02)	2.88a (0.08)	26.42abcd (0.08)	-0.19nopqrs (0.02)	0.30d (0.00)
30	HMLY	10.77b (0.01)	1.25d (0.00)	8.82b (0.01)	1.60cd (0.02)	4.39ab (0.07)	2.81a (0.02)	25.67fg (0.01)	0.09l (0.02)	-0.17hijk (0.01)
31	LHLY	12.75a (0.03)	1.23e (0.01)	10.60a (0.03)	3.61ab (0.07)	4.30ab (0.09)	2.76a (0.02)	26.62abc (0.01)	-0.26s (0.03)	0.43a (0.01)
32	MHLY	12.72a (0.08)	1.23e (0.01)	10.57a (0.10)	3.73ab (0.17)	4.35ab (0.14)	2.83a (0.08)	26.45abcd (0.10)	-0.15mnopqr (0.02)	0.33bcd (0.04)
33	HHLY	12.81a (0.02)	1.23e (0.01)	10.58a (0.04)	3.67ab (0.01)	4.41ab (0.03)	2.79a (0.02)	26.29bcde (0.04)	-0.09mn (0.02)	0.20e (0.03)
34	LLLY	8.80c (0.01)	1.29a (0.00)	7.02c (0.01)	0.00e (0.00)	4.37ab (0.07)	2.77a (0.03)	26.63ab (0.04)	-0.21qrs (0.01)	0.38abc (0.01)
35	MLLY	8.80c (0.03)	1.28a (0.01)	7.06c (0.05)	0.00e (0.00)	4.26ab (0.02)	2.75a (0.00)	26.29bcde (0.05)	-0.12mnopq (0.02)	0.19e (0.01)
36	HLLY	8.71c (0.01)	1.28ab (0.00)	7.01c (0.01)	0.00e (0.00)	4.29ab (0.12)	2.70a (0.01)	26.52abcd (0.07)	-0.19opqrs (0.02)	0.32cd (0.03)

[2] Refer to Table 1, Mean values in a column with different letters are significantly different ($p < 0.05$).

Table S2. Summary of sensory attribute mean values [1] [± standard error of means (SEM)] and significance of bitter x aroma and bitter x color two-way ANOVA interactions of the model grapefruit-like beverages as evaluated by a trained sensory panel ($n = 16$).

Attributes	Bitter (Naringin mg/kg) x Aroma (mg/kg) [2]							Bitter (Naringin mg/kg) x Color[3]						
	Bitter (Naringin mg/kg)							Bitter (Naringin mg/kg)						
	158 (low)		315 (medium)		473 (high)			158 (low)		315 (medium)		473 (high)		
	Aroma(mg/kg)							Color						
	2.5 Low	10 High	2.5 Low	10 High	2.5 Low	10 High		Red	Yellow	Red	Yellow	Red	Yellow	
Overall aroma intensity	5.40a (0.08)	6.33a (0.08)	5.71a (0.08)	6.37a (0.08)	5.46a (0.08)	6.39a (0.08)	NS	5.94a (0.08)	5.79a (0.08)	6.18a (0.08)	5.89a (0.08)	6.05a (0.08)	5.81a (0.08)	NS
Citrus aroma	4.19a (0.08)	4.83a (0.08)	4.33a (0.08)	4.82a (0.08)	4.17a (0.08)	4.93a (0.08)	NS	4.45a (0.08)	4.57a (0.08)	4.67a (0.08)	4.49a (0.08)	4.50a (0.08)	4.60a (0.08)	NS
Grapefruit aroma	4.01a (0.08)	4.54a (0.08)	4.07a (0.08)	4.39a (0.08)	4.10a (0.08)	4.53a (0.08)	NS	4.43a (0.08)	4.13a (0.08)	4.36a (0.08)	4.10a (0.08)	4.40a (0.08)	4.23a (0.08)	NS
Chemical aroma	**3.65c (0.10)**	**4.34a (0.10)**	**4.04a (0.10)**	**4.22a (0.10)**	**3.91b (0.10)**	**4.20a (0.10)**	*	4.04a (0.10)	3.94a (0.10)	4.18a (0.10)	4.08a (0.10)	4.04a (0.10)	4.08a (0.10)	NS
Deteriorated/rotten aroma	2.07a (0.06)	2.09a (0.06)	2.08a (0.06)	1.99a (0.06)	2.12a (0.06)	2.06a (0.06)	NS	2.18a (0.06)	1.98a (0.06)	2.05a (0.06)	2.03a (0.06)	2.19a (0.06)	1.99a (0.06)	NS
Muddy/mouldy aroma	2.02a (0.05)	2.23a (0.05)	2.12a (0.05)	2.15a (0.05)	2.13a (0.05)	2.23a (0.05)	NS	2.19a (0.05)	2.06a (0.05)	2.20a (0.05)	2.07a (0.05)	2.22a (0.05)	2.13a (0.05)	NS
Fruity aroma	3.70a (0.08)	4.08a (0.08)	3.69a (0.08)	3.98a (0.08)	3.74a (0.08)	3.95a (0.08)	NS	3.93a (0.08)	3.85a (0.08)	3.89a (0.08)	3.78a (0.08)	3.97a (0.08)	3.72a (0.08)	NS
Green/grassy aroma	2.85a (0.07)	3.40a (0.07)	2.92a (0.07)	3.26a (0.07)	2.96a (0.07)	3.43a (0.07)	NS	3.15a (0.07)	3.09a (0.07)	3.10a (0.07)	3.08a (0.07)	3.15a (0.07)	3.24a (0.07)	NS
Peely/peel oil aroma	3.17a (0.08)	3.90a (0.08)	3.22a (0.08)	3.72a (0.08)	3.22a (0.08)	3.77a (0.08)	NS	3.56a (0.08)	3.50a (0.08)	3.49a (0.08)	3.45a (0.08)	3.54a (0.08)	3.45a (0.08)	NS
Soapy aroma	3.08a (0.09)	3.45a (0.09)	3.12a (0.09)	3.28a (0.09)	3.28a (0.09)	3.34a (0.09)	NS	3.25a (0.09)	3.28a (0.09)	3.30a (0.09)	3.10a (0.09)	3.31a (0.09)	3.32a (0.09)	NS
Pungent aroma	2.73a 0.08)	3.47a (0.08)	2.95a (0.08)	3.32a (0.08)	2.85a (0.08)	3.50a (0.08)	NS	3.12a (0.08)	3.08a (0.08)	3.19a (0.08)	3.09a (0.08)	3.18a (0.08)	3.18a (0.08)	NS
Woody/spicy aroma	2.27a (0.06)	2.59a (0.06)	2.35a (0.06)	2.53a (0.06)	2.36a (0.06)	2.58 (0.06)	NS	2.43a (0.06)	2.43a (0.06)	2.53a (0.06)	2.35a (0.06)	2.52a (0.06)	2.42a (0.06)	NS
Sweet aroma	3.53a (0.09)	3.93a (0.09)	3.56a (0.09)	3.82a (0.09)	3.58a (0.09)	3.83 (0.09)	NS	3.85a (0.09)	3.61a (0.09)	3.72a (0.09)	3.66a (0.09)	3.81a (0.09)	3.60a (0.09)	NS
Overall flavour intensity	**6.06c (0.08)**	**6.22bc (0.08)**	**6.62a (0.08)**	**6.39b (0.08)**	**6.43a (0.08)**	**6.48a (0.08)**	*	6.19a (0.08)	6.09a (0.08)	6.62a (0.08)	6.40a (0.08)	6.37a (0.08)	6.54a (0.08)	NS
Sour flavour	4.83a (0.11)	4.98a (0.11)	5.20a (0.11)	4.95a (0.11)	5.40a (0.11)	5.41a (0.11)	NS	4.86a (0.11)	4.94a (0.11)	5.08a (0.11)	5.07a (0.11)	5.32a (0.11)	5.48a (0.11)	NS

Sweet flavour	4.53a (0.09)	4.75a (0.09)	4.45a (0.09)	4.58a (0.09)	4.18a (0.09)	4.24a (0.09)	NS	4.65a (0.09)	4.63a (0.09)	4.59a (0.09)	4.43a (0.09)	4.19a (0.09)	4.23a (0.09)	NS
Bitter flavour	**4.00d (0.12)**	**3.88d (0.12)**	**4.87bc (0.12)**	**4.05d (0.12)**	**5.44a (0.12)**	**4.89b (0.12)**	*	4.01a (0.12)	3.86a (0.12)	4.58a (0.12)	4.34a (0.12)	5.08a (0.12)	5.25a (0.12)	NS
Astringent flavour	4.60a (0.10)	4.63a (0.10)	5.04a (0.10)	4.76a (0.10)	5.25a (0.10)	4.98a (0.10)	NS	4.71a (0.10)	4.52a (0.10)	5.01a (0.10)	4.80a (0.10)	5.12a (0.10)	5.11a (0.10)	NS
Citrus flavour	4.42a (0.08)	4.62a (0.08)	4.29a (0.08)	4.59a (0.08)	4.20a (0.08)	4.57a (0.08)	NS	4.54a (0.08)	4.50a (0.08)	4.41a (0.08)	4.48a (0.08)	4.45a (0.08)	4.32a (0.08)	NS
Grapefruit flavour	4.17a (0.09)	4.21a (0.09)	4.57a (0.09)	4.25a (0.09)	4.73a (0.09)	4.73a (0.09)	NS	4.37a (0.09)	4.01a (0.09)	4.49a (0.09)	4.33a (0.09)	4.73a (0.09)	4.72a (0.09)	NS
Bitter aftertaste	**3.70c (0.12)**	**3.68c (0.12)**	**4.54b (0.12)**	**3.97c (0.12)**	**5.23a (0.12)**	**4.60b (0.12)**	*	**3.79bc (0.12)**	**3.59c (0.12)**	**4.40b (0.12)**	**4.11b (0.12)**	**4.77a (0.12)**	**5.06a (0.12)**	*

[1] Mean values in a row for a specific two-way interaction effect printed in bold and with different letters are significantly different;, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.0001$; NS = not significantly different Attribute intensity scale (0–10 cm) ranging from 'not intense' (0) to 'very intense' (10); [2]Aroma blend [Caryophylene, citral, nootkatone, aldehyde C8 (octanal), aldehyde C9 (nonanal), aldehyde C10 (decanal)] [3] Red color = 0.001% solution (30 % Sunset yellow and 70 % Ponceau red); Yellow color = 0.0125 % Quinoline yellow.

Table S3. Summary of sensory attribute mean values [1] [± standard error of means (SEM)] and significance of bitter x sweet and aroma x color two-way ANOVA interactions of the model grapefruit-like beverages as evaluated by a trained sensory panel (n = 16).

Attributes	**Bitter (Naringin mg/kg) x Sweet (°Brix)**										**Aroma mg/kg[2]x Color[3]**				
	Bitter (Naringin mg/kg)										**Aroma mg/kg**				
	158 (low)			**315 (medium)**			**473 (high)**				**2.5 (low)**		**10 (high)**		
	Sweet (Brix)										**Color**				
	8 Low	**10 Medium**	**12 High**	**8 Low**	**10 Medium**	**12 High**	**8 Low**	**10 Medium**	**12 High**		**Red**	**Yellow**	**Red**	**Yellow**	
Overall aroma intensity	5.90a[2] (0.10)	5.90a (0.10)	5.80a (0.10)	6.20a (0.10)	5.89a (0.10)	6.03a (0.10)	5.80a (0.10)	5.94a (0.10)	6.05a (0.10)	NS	5.59a (0.06)	5.45a (0.06)	6.52a (0.06)	6.21a (0.06)	NS
Citrus aroma	4.31a (0.10)	4.68a (0.10)	4.54a (0.10)	4.64a (0.10)	4.49a (0.10)	4.60a (0.10)	4.58a (0.10)	4.56a (0.10)	4.51a (0.10)	NS	4.22a (0.07)	4.24a (0.07)	4.86a (0.07)	4.86a (0.07)	NS
Grapefruit aroma	4.19a (0.10)	4.39a (0.10)	4.25a (0.10)	4.20a (0.10)	4.27a (0.10)	4.22a (0.10)	4.29a (0.10)	4.38a (0.10)	4.38a (0.10)	NS	4.12a (0.06)	4.00a (0.06)	4.67a (0.06)	4.30a (0.06)	NS
Chemical aroma	3.91a (0.12)	4.02a (0.12)	4.04a (0.12)	4.33a (0.12)	3.98a (0.12)	4.08a (0.12)	3.94a (0.12)	4.08a (0.12)	4.16a (0.12)	NS	3.91a (0.08)	3.82a (0.08)	4.26a (0.08)	4.25a (0.08)	NS
Deteriorated/rotten aroma	2.03a (0.08)	2.02a (0.08)	2.19a (0.08)	2.06a (0.08)	2.05a (0.08)	2.01a (0.08)	2.06a (0.08)	2.04a (0.08)	2.15a (0.08)	NS	2.18a (0.05)	2.01a (0.05)	2.10a (0.05)	1.99a (0.05)	NS
Muddy/mouldy aroma	2.12a (0.06)	2.13a (0.06)	2.12a (0.06)	2.23a (0.06)	2.11a (0.06)	2.06a (0.06)	2.17a (0.06)	2.16a (0.06)	2.20a (0.06)	NS	2.15a (0.04)	2.02a (0.04)	2.26a (0.04)	2.15a (0.04)	NS
Fruity aroma	3.89a (0.10)	4.02a (0.10)	3.75a (0.10)	3.78a (0.10)	3.87a (0.10)	3.85a (0.10)	3.82a (0.10)	3.82a (0.10)	3.90a (0.10)	NS	3.79a (0.07)	3.63a (0.07)	4.07a (0.07)	3.94a (0.07)	NS

Green/grassy aroma	3.10a (0.08)	3.22a (0.08)	3.05a (0.08)	3.15a (0.08)	3.09a (0.08)	3.02a (0.08)	3.11a (0.08)	3.24a (0.08)	3.24a (0.08)	NS	2.92a (0.06)	2.90a (0.06)	3.35a (0.06)	3.37a (0.06)	NS
Peely/peel oil aroma	3.58a (0.10)	3.57a (0.10)	3.45a (0.10)	3.50a (0.10)	3.52a (0.10)	3.39a (0.10)	3.39a (0.10)	3.66a (0.10)	3.54a (0.10)	NS	3.25a (0.06)	3.16a (0.06)	3.81a (0.06)	3.78a (0.06)	NS
Soapy aroma	3.29a (0.11)	3.46a (0.11)	3.05a (0.11)	3.39a (0.11)	3.23a (0.11)	2.99a (0.11)	3.54a (0.11)	3.31a (0.11)	3.09a (0.11)	NS	3.18a (0.07)	3.14a (0.07)	3.39a (0.07)	3.32a (0.07)	NS
Pungent aroma	**2.96ab (0.10)**	**3.20a (0.10)**	**3.13a (0.10)**	**3.40a (0.10)**	**2.96b (0.10)**	**3.05ab (0.10)**	**3.15a (0.10)**	**3.23a (0.10)**	**3.14a (0.10)**	*	2.87a (0.07)	2.81a (0.07)	3.45a (0.07)	3.41a (0.07)	NS
Woody/spicy aroma	2.44a (0.07)	2.51a (0.07)	2.34a (0.07)	2.51a (0.07)	2.43a (0.07)	2.38a (0.07)	2.49a (0.07)	2.52a (0.07)	2.40a (0.07)	NS	2.39a (0.05)	2.26a (0.05)	2.60a (0.05)	2.54a (0.05)	NS
Sweet aroma	3.77a (0.10)	3.78a (0.10)	3.64a (0.10)	3.72a (0.10)	3.70a (0.10)	3.66a (0.10)	3.57a (0.10)	3.68a (0.10)	3.86a (0.10)	NS	3.65a (0.07)	3.46a (0.07)	3.93a (0.07)	3.79a (0.07)	NS
Overall flavour intensity	6.02a (0.10)	6.15a (0.10)	6.24a (0.10)	6.57a (0.10)	6.37a (0.10)	6.58a (0.10)	6.63a (0.10)	6.35a (0.10)	6.35a (0.10)	NS	6.38a (0.07)	6.36a (0.07)	6.41a (0.07)	6.32a (0.07)	NS
Sour flavour	5.77a (0.14)	4.71a (0.14)	4.23a (0.14)	5.94a (0.14)	5.14a (0.14)	4.15a (0.14)	6.09a (0.14)	5.37a (0.14)	4.76a (0.14)	NS	5.20a (0.09)	5.10a (0.09)	4.99a (0.09)	5.24a (0.09)	NS
Sweet flavour	3.15a (0.11)	4.78a (0.11)	5.99a (0.11)	3.02a (0.11)	4.57a (0.11)	5.95a (0.11)	2.95a (0.11)	4.16a (0.11)	5.51a (0.11)	NS	4.34a (0.07)	4.43a (0.07)	4.61a (0.07)	4.44a (0.07)	NS
Bitter flavour	4.64a (0.15)	3.91a (0.15)	3.27a (0.15)	5.28a (0.15)	4.20a (0.15)	3.89a (0.15)	5.81a (0.15)	5.19a (0.15)	4.50a (0.15)	NS	**4.91a (0.10)**	**4.64a (0.11)**	**4.21c (0.11)**	**4.33b (0.11)**	*
Astringent flavour	5.10a (0.13)	4.71a (0.13)	4.05a (0.13)	5.42a (0.13)	4.85a (0.13)	4.45a (0.13)	5.53a (0.13)	5.07a (0.13)	4.75a (0.13)	NS	5.04a (0.08)	4.89a (0.08)	4.85a (0.08)	4.73a (0.08)	NS
Citrus flavour	4.61a (0.10)	4.45a (0.10)	4.50a (0.10)	4.29a (0.10)	4.56a (0.10)	4.47a (0.10)	4.38a (0.10)	4.33a (0.10)	4.46a (0.10)	NS	4.34a (0.07)	4.27a (0.07)	4.59a (0.07)	4.60a (0.07)	NS
Grapefruit flavour	4.24a (0.12)	4.28a (0.12)	4.04a (0.12)	4.46a (0.12)	4.51a (0.12)	4.26a (0.12)	4.87a (0.12)	4.83a (0.12)	4.48a (0.12)	NS	4.55a (0.08)	4.42a (0.08)	4.50a (0.08)	4.29a (0.08)	NS
Bitter aftertaste	4.21a (0.15)	3.67a (0.15)	3.19a (0.15)	5.10a (0.15)	4.14a (0.15)	3.54a (0.15)	5.40a (0.15)	4.93a (0.15)	4.41a (0.15)	NS	4.59a (0.10)	4.40a (0.10)	4.05a (0.10)	4.12a (0.10)	NS

[1] Mean values in a row for a specific two-way interaction effect printed in bold and with different letters are significantly different, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.0001$; NS = not significantly different**.** Attribute intensity scale (0–10 cm) ranging from 'not intense' (0) to 'very intense' (10); [2]Aroma blend [Caryophylene, citral, nootkatone, aldehyde C8 (octanal), aldehyde C9 (nonanal), aldehyde C10 (decanal)] [3]Red color = 0.001 % solution (30 % Sunset yellow and 70 % Ponceau red); Yellow color = 0.0125% Quinoline yellow.

Table S4. Summary of sensory attribute mean values [1] [± standard error of means (SEM)] and significance of sweet x aroma and sweet x color two-way ANOVA interactions of the model grapefruit-like beverages as evaluated by a trained sensory panel (n = 16).

Attributes	Sweet (°Brix) x Aroma mg/kg[2]							Sweet (°Brix) x Color[3]						
	Sweet (Brix)							Sweet (°Brix)						
	8 Low		10 Medium		12 High			8 Low		10 Medium		12 High		
	Aroma mg/kg							Color						
	2.5 Low	10 High	2.5 Low	10 High	2.5 Low	10 High		Red	Yellow	Red	Yellow	Red	Yellow	
Overall aroma intensity	5.57a[2] (0.08)	6.36a (0.08)	5.44a (0.08)	6.38a (0.08)	5.57a (0.08)	6.35a (0.08)	NS	6.11a (0.08)	5.82a (0.08)	5.94a (0.08)	5.88a (0.08)	6.13a (0.08)	5.79a (0.08)	NS
Citrus aroma	4.17a (0.08)	4.84a (0.08)	4.27a (0.08)	4.88a (0.08)	4.24a (0.08)	4.85a (0.08)	NS	4.60a (0.08)	4.42a (0.08)	4.52a (0.08)	4.64a (0.08)	4.50a (0.08)	4.60a (0.08)	NS
Grapefruit aroma	4.01a (0.08)	4.44a (0.08)	4.16a (0.08)	4.53a (0.08)	4.00a (0.08)	4.50a (0.08)	NS	4.43a (0.08)	4.03a (0.08)	4.46a (0.08)	4.23a (0.08)	4.30a (0.08)	4.20a (0.08)	NS
Chemical aroma	3.93a (0.10)	4.20a (0.10)	3.79a (0.10)	4.26a (0.10)	3.88a (0.10)	4.30a (0.10)	NS	4.15a (0.10)	3.98a (0.10)	3.99a (0.10)	4.06a (0.10)	4.12a (0.10)	4.06a (0.10)	NS
Deteriorated/rotten aroma	2.06a (0.06)	2.04a (0.06)	2.02a (0.06)	2.06a (0.06)	2.20a (0.06)	2.04a (0.06)	NS	2.16a (0.06)	1.93a (0.06)	2.10a (0.06)	1.98a (0.06)	2.16a (0.06)	2.08a (0.06)	NS
Muddy/mouldy aroma	2.14a (0.05)	2.21a (0.05)	2.05a (0.05)	2.22a (0.05)	2.08a (0.05)	2.18a (0.05)	NS	2.25a (0.05)	2.10a (0.05)	2.16a (0.05)	2.10a (0.05)	2.20a (0.05)	2.06a (0.05)	NS
Fruity aroma	3.66a (0.08)	4.01a (0.08)	3.72a (0.08)	4.09a (0.08)	3.75a (0.08)	3.92a (0.08)	NS	3.95a (0.08)	3.71a (0.08)	3.90a (0.08)	3.91a (0.08)	3.94a (0.08)	3.73a (0.08)	NS
Green/grassy aroma	2.87a (0.07)	3.36a (0.07)	2.94a (0.07)	3.42a (0.07)	2.91a (0,07)	3.30a (0.07)	NS	3.12a (0.07)	3.11a (0.07)	3.17a (0.07)	3.19a (0.07)	3.10a (0.07)	3.10a (0.07)	NS
Peely/peel oil aroma	3.13a (0.08)	3.84a (0.08)	3.30a (0.08)	3.80a (0.08)	3.18a (0.08)	3.74a (0.08)	NS	3.54a (0.08)	3.43a (0.08)	3.55a (0.08)	3.55a (0.08)	3.49a (0.08)	3.42a (0.08)	NS
Soapy aroma	3.35a (0.09)	3.46a (0.09)	3.18a (0.09)	3.48a (0.09)	2.96a (0.09)	3.12a (0.09)	NS	3.42a (0.09)	3.39a (0.09)	3.29a (0.09)	3.37a (0.09)	3.14a (0.09)	2.94a (0.09)	NS
Pungent aroma	2.92a (0.08)	3.42a (0.08)	2.78a (0.08)	3.48a (0.08)	2.83a (0.08)	3.39a (0.08)	NS	3.20a (0.08)	3.14a (0.08)	3.13a (0.08)	3.13a (0.08)	3.16a (0.08)	3.06a (0.08)	NS
Woody/spicy aroma	2.32a (0.06)	2.64a (0.06)	2.38a (0.06)	2.59a (0.06)	2.27a (0.06)	2.47a (0.06)	NS	2.53a (0.06)	2.44a (0.06)	2.52a (0.06)	2.45a (0.06)	2.43a (0.06)	2.31a (0.06)	NS
Sweet aroma	3.44a (0.09)	3.93a (0.09)	3.58a (0.09)	3.86a (0.09)	3.64a (0.09)	3.79a (0.09)	NS	3.74a (0.09)	3.63a (0.09)	3.76a (0.09)	3.68a 0.09)	3.88a (0.09)	3.56a (0.09)	NS
Overall flavour intensity	6.46a (0.08)	6.36a (0.08)	6.31a (0.08)	6.28a (0.08)	6.35a (0.08)	6.46a (0.08)	NS	6.51a (0.08)	6.31a (0.08)	6.29a (0.08)	6.30a (0.08)	6.39a (0.08)	6.42a (0.08)	NS
Sour flavour	5.96a (0.11)	5.91a (0.11)	5.07a (0.11)	5.08a (0.11)	4.40a (0.11)	4.35a (0.11)	NS	6.01a (0.11)	5.86a (0.11)	4.96a (0.11)	5.19a (0.11)	4.31a (0.11)	4.44a (0.11)	NS
Sweet flavour	2.92a (0.09)	3.16a (0.09)	4.38a (0.09)	4.63a (0.09)	5.85a (0.09)	5.78a (0.09)	NS	3.09a (0.09)	2.99a (0.09)	4.49a (0.09)	4.52a (0.09)	5.85a (0.09)	5.78a (0.09)	NS

Bitter flavour	5.51a (0.12)	4.98a (0.12)	4.80a (0.12)	4.07a (0.12)	4.02a (0.12)	3.76a (0.12)	NS	5.30a (0.12)	5.18a (0.12)	4.55a (0.12)	4.32a (0.12)	3.82a (0.12)	3.96a (0.12)	NS
Astringent flavour	5.42a (0.10)	5.28a (0.10)	4.96a (0.10)	4.79a (0.10)	4.52a (0.10)	4.31a (0.12)	NS	**5.62a (0.10)**	**5.08b (0.10)**	**4.92b (0.10)**	**4.83b (0.10)**	**4.30c (0.10)**	**4.52c (0.10)**	*
Citrus flavour	4.29a (0.08)	4.56a (0.08)	4.33a (0.08)	4.56a (0.08)	4.29a (0.08)	4.67a 0.08)	NS	**4.59a (0.08)**	**4.26b (0.08)**	**4.40a (0.08)**	**4.50a (0.08)**	**4.42a (0.08)**	**4.54a (0.08)**	*
Grapefruit flavour	4.45a (0.09)	4.60a (0.09)	4.69a (0.09)	4.38a (0.09)	4.32a (0.09)	4.20a (0.09)	NS	4.60a (0.09)	4.45a (0.09)	4.60a (0.09)	4.48a (0.09)	4.39a (0.09)	4.14a (0.09)	NS
Bitter aftertaste	5.03a (0.12)	4.77a (0.12)	4.54a (0.12)	3.96a (0.12)	3.91a (0.12)	3.52a (0.12)	NS	4.94a (0.12)	4.87a (0.12)	4.36a (0.12)	4.13a (0.12)	3.65a (0.12)	3.77a (0.12)	NS

[1] Mean values in a row for a specific two-way interaction effect printed in bold and with different letters are significantly different;, * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.0001$; NS = not significantly different Attribute intensity scale (0-10 cm) ranging from 'not intense' (0) to 'very intense' (10); [2] Aroma blend [Caryophylene, citral, nootkatone, aldehyde C8 (octanal), aldehyde C9 (nonanal), aldehyde C10 (decanal)] [3] Red color = 0.001 % solution (30 % Sunset yellow and 70 % Ponceau red); Yellow color = 0.0125% Quinoline yellow.