

Table S1: Color values of craft beer of different styles (n = 60).

Beer brands ¹	Beer style ²	Color (EBC) ³	EBC (BJCP) ⁴	Beer brands ¹	Beer style ²	Color (EBC) ³	EBC (BJCP) ⁴
1	American Pale Ale	10.1 ± 0.15 ^{p q r}	5-10	31	India Pale Ale	9.8 ± 0.18 ^{q r s}	6-14
2	American Pale Ale	5.4 ± 0.03 ^{x y}	5-10	32	India Pale Ale	8.7 ± 0.03 ^{s t}	6-14
3	American Pale Ale	5.6 ± 0.14 ^{u v w}	5-10	33	India Pale Ale	9.3 ± 0.08 ^{r s}	6-14
4	American Pale Ale	8.4 ± 0.09 ^{s t u}	5-10	34	India Pale Ale	12.2 ± 0.07 ^{o p}	6-14
5	American Pale Ale	11.2 ± 0.11 ^{o p}	5-10	35	India Pale Ale	14.1 ± 0.13 ^{m n}	6-14
6	American Pale Ale	11.8 ± 0.03 ^{n o p}	5-10	36	India Pale Ale	7.1 ± 0.02 ^{t u v}	6-14
7	American Pale Ale	10.4 ± 0.10 ^{m n}	5-10	37	Kölsch	3.5 ± 0.01 ^{x y z}	3.5-5
8	American Pale Ale	8.5 ± 0.01 ^{s t u}	5-10	38	Lager	2.7 ± 0.01 ^{y z}	2-4
9	Barleywine	18.9 ± 0.09 ^j	10-19	39	Lager	2.9 ± 0.01 ^z	2-4
10	Belgian Blond Ale	7.1 ± 0.11 ^{s t u}	4-7	40	Lager	2.2 ± 0.01 ^z	2-4
11	Berliner Weisse	2.1 ± 0.03 ^{s t}	2-3	41	Lager	3.9 ± 0.03 ^{x y z}	2-4
12	Black India Pale Ale	40.3 ± 0.73 ^c	25-40	42	Lager	3.2 ± 0.05 ^{y z}	2-4
13	Blonde Ale	4.4 ± 0.07 ^{x y}	3-6	43	Oatmeal Stout	39.7 ± 0.43 ^c	22-40
14	Blonde Ale	4.3 ± 0.05 ^{r s}	3-6	44	Oatmeal Stout	39.4 ± 0.80 ^a	22-40
15	Blonde Ale	5.3 ± 0.03 ^{v w x}	3-6	45	Porter	37.3 ± 0.7 ^g	22-40
16	Brown Ale	32.2 ± 0.15 ^{h i}	18-35	46	Porter	41.3 ± 0.63 ^e	22-40
17	Brown Ale	35.5 ± 0.65 ^g	18-35	47	Porter	41.1 ± 2.72 ^e	22-40
18	Brown Ale	32.3 ± 0.15 ^{h i}	18-35	48	Porter	40.8 ± 0.20 ^f	22-40
19	Brown Ale	31.4 ± 0.05 ⁱ	18-35	49	Porter	39.9 ± 0.20 ^c	22-40
20	Brown Ale	30.5 ± 0.04 ^{n o}	18-35	50	Porter	38.3 ± 1.47 ^c	22-40
21	California Common	14.6 ± 0.08 ^{k l}	10-14	51	Porter	33.8 ± 0.3 ^h	22-40
22	Cream Ale	3.5 ± 0.02 ^{x y z}	2.5-5	52	Scottish Ale	15.6 ± 1.82 ^{l m}	13-22
23	Cream Ale	3.6 ± 0.04 ^{x y z}	2.5-5	53	Stout	41.7 ± 1.93 ^{e f}	30-40
24	Dark Lager	18.1 ± 0.41 ^{j k}	14-22	54	Stout	39.5 ± 0.56 ^d	30-40
25	Dubbel	17.5 ± 0.05 ^{d e}	10-17	55	Sweet Stout	32.8 ± 0.36 ^{h i}	30-40
26	Golden Ale	3.8 ± 0.01 ^{x y z}	2-6	56	Sweet Stout	39.9 ± 0.60 ^b	30-40
27	Imperial Stout	39.9 ± 0.62 ^a	30-40	57	Vienna	14.3 ± 0.05 ^j	9-15
28	Imperial Stout	40.1 ± 0.52 ^a	30-40	58	Weissbier	5.7 ± 0.10 ^{o p q}	2-6
29	India Pale Ale	8.4 ± 0.08 ^{s t u}	6-14	59	Witbier	3.6 ± 0.04 ^{x y z}	2-4
30	India Pale Ale	8.1 ± 0.04 ^{s t u}	6-14	60	Witbier	4.1 ± 0.01 ^{w x y}	2-4

¹ Beer brands were assigned a number (1-60).

² Beer style established by the Beer Judge Certification Program (BJCP).

³ Color units EBC (European Brewery Convention).

⁴ Values accepted by the Beer Judge Certification Program (1-65 EBC).

Values represent means ± standard deviation. Means with different letters per column indicate significant statistical differences (Tukey, $p \leq 0.05$).

Table S2: Specific gravity values of craft beer of different styles (n = 60).

Beer brands ¹	Beer style ²	SG ³	SG (BJCP) ⁴	Beer brands ¹	Beer style ²	SG ³	SG (BJCP) ⁴
1	American Pale Ale	1.013 ± 0.01 ^{z aa ab}	1.010-1.015	31	India Pale Ale	1.011 ± 0.06 ^{vwxyz aa}	1.008-1.014
2	American Pale Ale	1.016 ± 0.01 ^{tuvwxyz}	1.010-1.015	32	India Pale Ale	1.012 ± 0.05 ^{nopqrstu}	1.008-1.014
3	American Pale Ale	1.012 ± 0.01 ^{ijklmn}	1.010-1.015	33	India Pale Ale	1.011 ± 0.08 ^{stuvwxy}	1.008-1.014
4	American Pale Ale	1.012 ± 0.02 ^{ijklmnop}	1.010-1.015	34	India Pale Ale	1.014 ± 0.04 ^{uvwxyz aa}	1.008-1.014
5	American Pale Ale	1.010 ± 0.01 ^{opqrstu}	1.010-1.015	35	India Pale Ale	1.014 ± 0.06 ^{hijk}	1.008-1.014
6	American Pale Ale	1.010 ± 0.03 ^{lmnopqrs}	1.010-1.015	36	India Pale Ale	1.008 ± 0.02 ^{qrstuvw}	1.008-1.014
7	American Pale Ale	1.015 ± 0.02 ^{tuvwxyz}	1.010-1.015	37	Kölsch	1.011 ± 0.02 ^{klmnop}	1.007-1.011
8	American Pale Ale	1.015 ± 0.01 ^{rstuvw x}	1.010-1.015	38	Lager	1.005 ± 0.04 ^{wxyz aa ab}	1.004-1.010
9	Barleywine	1.019 ± 0.02 ^{cde}	1.016-1.030	39	Lager	1.010 ± 0.06 ^{ijkl}	1.004-1.010
10	Belgian Blond Ale	1.008 ± 0.02 ^{yz aa ab}	1.008-1.018	40	Lager	1.008 ± 0.07 ^{pqrstuv}	1.004-1.010
11	Berliner Weisse	1.006 ± 0.01 ^{ijklm}	1.003-1.006	41	Lager	1.007 ± 0.04 ^{tuvwxyz}	1.004-1.010
12	Black India Pale Ale	1.006 ± 0.04 ^{tuvwxyz}	1.010-1.018	42	Lager	1.004 ± 0.08 ^{aa ab}	1.004-1.010
13	Blonde Ale	1.015 ± 0.04 ^{fghi}	1.008-1.018	43	Oatmeal Stout	1.018 ± 0.09 ^{cd}	1.010-1.018
14	Blonde Ale	1.008 ± 0.05 ^{oprstuv}	1.008-1.018	44	Oatmeal Stout	1.020 ± 0.03 ^a	1.010-1.018
15	Blonde Ale	1.018 ± 0.02 ^{def}	1.008-1.018	45	Porter	1.009 ± 0.07 ^{uvwxyz aa}	1.008-1.014
16	Brown Ale	1.013 ± 0.01 ^{uvwxyz aa}	1.008-1.013	46	Porter	1.014 ± 0.08 ^{efgh}	1.008-1.014
17	Brown Ale	1.013 ± 0.05 ^{ghij}	1.008-1.013	47	Porter	1.014 ± 0.06 ^{cd}	1.008-1.014
18	Brown Ale	1.009 ± 0.01 ^{mnopqrst}	1.008-1.013	48	Porter	1.014 ± 0.09 ^{ghij}	1.008-1.014
19	Brown Ale	1.008 ± 0.04 ^{wxyz aa ab}	1.008-1.013	49	Porter	1.013 ± 0.04 ^{ijkl}	1.008-1.014
20	Brown Ale	1.013 ± 0.05 ^{hijk}	1.008-1.013	50	Porter	1.011 ± 0.06 ^{ijklmnop}	1.008-1.014
21	California Common	1.014 ± 0.04 ^c	1.011-1.014	51	Porter	1.010 ± 0.08 ^{def}	1.008-1.014
22	Cream Ale	1.007 ± 0.03 ^{xyz aa ab}	1.006-1.012	52	Scottish Ale	1.013 ± 0.03 ^{ijkl}	1.010-1.016
23	Cream Ale	1.010 ± 0.02 ^{ghij}	1.006-1.012	53	Stout	1.012 ± 0.02 ^{qrstuvw}	1.010-1.022
24	Dark Lager	1.012 ± 0.06 ^{efg}	1.008-1.012	54	Stout	1.010 ± 0.04 ^{lmnopqr}	1.010-1.022
25	Dubbel	1.018 ± 0.03 ^{ijkl}	1.008-1.018	55	Sweet Stout	1.014 ± 0.05 ^{hijk}	1.012-1.024
26	Golden Ale	1.006 ± 0.07 ^{ab}	1.006-1.012	56	Sweet Stout	1.012 ± 0.04 ^{ijklmno}	1.012-1.024
27	Imperial Stout	1.018 ± 0.06 ^{ijkl}	1.018-1.030	57	Vienna	1.010 ± 0.03 ^{klmnopq}	1.010-1.014
28	Imperial Stout	1.030 ± 0.03 ^b	1.018-1.030	58	Weissbier	1.013 ± 0.06 ^{tuvwxyz}	1.010-1.014
29	India Pale Ale	1.008 ± 0.05 ^{z aa ab}	1.008-1.014	59	Witbier	1.008 ± 0.04 ^{xyz aa ab}	1.008-1.012
30	India Pale Ale	1.012 ± 0.08 ^{ijkl}	1.008-1.014	60	Witbier	1.010 ± 0.02 ^{uvwxyz aa}	1.008-1.012

¹ Beer brands were assigned a number (1-60).

² Beer style established by the Beer Judge Certification Program (BJCP).

³ SG (Specific Gravity).

⁴ Values accepted by the Beer Judge Certification Program (1.001-1.040).

Values represent means ± standard deviation. Means with different letters per column indicate significant statistical differences (Tukey, $p \leq 0.05$).

Table S3: Alcohol by volume of craft beer of different styles (n = 60).

Beer brands ¹	Beer style ²	Alcohol (% v/v) ³	Alcohol on label (% v/v) ⁴	Beer brands ¹	Beer style ²	Alcohol (% v/v) ³	Alcohol on label (% v/v) ⁴
1	American Pale Ale	4.7 ± 0.47 ^{ab ac ad}	5	31	India Pale Ale	7.1 ± 0.57 ^{hij}	7
2	American Pale Ale	6.0 ± 0.47 ^{fg}	5	32	India Pale Ale	5.9 ± 0.00 ^{fgh}	5.7
3	American Pale Ale	6.2 ± 0.0 ^{cd}	6.5	33	India Pale Ale	7.2 ± 0.00 ^{klmnop}	7.3
4	American Pale Ale	5.1 ± 0.47 ^{zaa ab}	5.2	34	India Pale Ale	5.9 ± 0.00 ^{mno pq}	5.8
5	American Pale Ale	4.7 ± 0.00 ^{uvwxyz}	4.5	35	India Pale Ale	6.8 ± 0.00 ^{ijkl}	6.4
6	American Pale Ale	5.6 ± 0.00 ^{ijklm}	6	36	India Pale Ale	7.1 ± 0.47 ^{ef}	7
7	American Pale Ale	5.6 ± 0.00 ^{ijklm}	5.9	37	Kölsch	5.6 ± 0.00 ^{wxyz}	5
8	American Pale Ale	5.1 ± 0.00 ^{lmnop}	5.2	38	Lager	4.9 ± 0.00 ^{zaa ab}	4.8
9	Barleywine	10.4 ± 0.00 ^a	10	39	Lager	4.5 ± 0.00 ^{ad}	3.9
10	Belgian Blond Ale	6.3 ± 0.00 ^{fghi}	6.2	40	Lager	5.1 ± 0.00 ^{ac ad}	4.2
11	Berliner Weisse	4.0 ± 0.00 ^{stuvwxy}	3.5	41	Lager	5.4 ± 0.00 ^{pqrstuv}	5
12	Black India Pale Ale	6.2 ± 0.00 ^{fghi}	6.5	42	Lager	4.8 ± 0.00 ^{aa ab ac}	4
13	Blonde Ale	4.6 ± 0.00 ^{xyz aa}	4.5	43	Oatmeal Stout	4.5 ± 0.00 ^{tuvwxy}	4.2
14	Blonde Ale	4.6 ± 0.00 ^{opqrst}	5	44	Oatmeal Stout	10.0 ± 0.00 ^b	10
15	Blonde Ale	5.3 ± 0.00 ^{yz aa ab}	5	45	Porter	6.5 ± 0.00 ^{stuvwxy}	6
16	Brown Ale	6.4 ± 0.00 ^{pqrstuvw}	6	46	Porter	6.5 ± 0.47 ^{hij}	6.2
17	Brown Ale	4.6 ± 0.47 ^{wxyz}	4.8	47	Porter	6.3 ± 0.47 ^{ijk}	6.2
18	Brown Ale	5.3 ± 0.47 ^{fghi}	5	48	Porter	5.0 ± 0.00 ^{nopr s}	5.5
19	Brown Ale	5.9 ± 0.00 ^{ijk}	5.5	49	Porter	5.5 ± 0.00 ^{pqrst}	5.5
20	Brown Ale	5.1 ± 0.00 ^{pqrstuvw x}	5.3	50	Porter	5.8 ± 0.47 ^{de}	5.2
21	California Common	5.5 ± 0.00 ^{xyz aa}	5	51	Porter	4.6 ± 0.00 ^{opqrst}	4.6
22	Cream Ale	5.5 ± 0.00 ^{pqrst}	5	52	Scottish Ale	6.4 ± 0.00 ^{pqrstuv}	6.1
23	Cream Ale	4.3 ± 0.47 ^{yz aa ab}	4.5	53	Stout	4.8 ± 0.00 ^{mno pqr}	5
24	Dark Lager	5.5 ± 0.00 ^{pqrstu}	5	54	Stout	5.6 ± 0.00 ^{ijklmn}	5.5
25	Dubbel	6.6 ± 0.00 ^{bc}	6.4	55	Sweet Stout	9.2 ± 0.00 ^b	9
26	Golden Ale	5.1 ± 0.47 ^{pqrstuvw x}	5	56	Sweet Stout	6.0 ± 0.00 ^{mno p}	6
27	Imperial Stout	9.0 ± 0.00 ^{fg}	9	57	Vienna	5.5 ± 0.47 ^{vwxyz}	5
28	Imperial Stout	8.1 ± 0.00 ^{ij}	8	58	Weissbier	4.4 ± 0.00 ^{pqrstuv}	4.8
29	India Pale Ale	7.8 ± 0.00 ^{nopr s}	7	59	Witbier	5.0 ± 0.00 ^{ijklmno}	4.8
30	India Pale Ale	7.3 ± 0.00 ^{fghi}	7.1	60	Witbier	5.0 ± 0.00 ^{stuvwxy}	5

¹ Beer brands were assigned a number (1-60).

² Beer style established by the Beer Judge Certification Program (BJCP).

³ Alcohol (% v/v).

⁴ Alcohol (% v/v) reported by the manufacturer.

Values accepted by NOM-199-SCFI-2017 (> 2% < 20%, v/v).

Values represent means ± standard deviation. Means with different letters per column indicate significant statistical differences (Tukey, $p \leq 0.05$).

Table S4: Bitterness values of craft beer of different styles (n = 60).

Beer brands ¹	Beer style ²	Bitterness (IBU) ³	IBU (BJCP) ⁴	Beer brands ¹	Beer style ²	Bitterness (IBU) ³	IBU (BJCP) ⁴
1	American Pale Ale	33.1 ± 1.05 ^{g h i j}	30-50	31	India Pale Ale	47.5 ± 5.5 ^d	40-70
2	American Pale Ale	34.5 ± 0.85 ^{m n o p}	30-50	32	India Pale Ale	39.0 ± 2.81 ^{f g}	40-70
3	American Pale Ale	38.0 ± 0.16 ^{j k l m}	30-50	33	India Pale Ale	66.0 ± 1.72 ^{b c}	40-70
4	American Pale Ale	41.1 ± 1.37 ^{e f}	30- 50	34	India Pale Ale	65.0 ± 1.57 ^{b c}	40-70
5	American Pale Ale	31.0 ± 1.83 ^{o p q r s t}	30-50	35	India Pale Ale	39.0 ± 1.48 ^{f g}	40-70
6	American Pale Ale	42.1 ± 1.07 ^{w x y z a a a b a c a d}	30-50	36	India Pale Ale	63.0 ± 0.87 ^c	40-70
7	American Pale Ale	36.0 ± 0.92 ^{f g h i}	30-50	37	Kölsch	19.0 ± 0.65 ^{v w x y z a a a b a c}	18-30
8	American Pale Ale	46.1 ± 0.46 ^{s t u v w x y}	30-50	38	Lager	15.5 ± 2.18 ^{f g h i}	8-18
9	Barleywine	55.5 ± 1.96 ^{d e}	50-100	39	Lager	17.0 ± 0.72 ^{r s t u v w}	8-18
10	Belgian Blond Ale	23.0 ± 2.62 ^{m n o p q r}	15-30	40	Lager	16.5 ± 1.27 ^{k l m n o}	8-18
11	Berliner Weisse	14.5 ± 0.40 ^{u v w x y z a a}	3-8	41	Lager	9.0 ± 1.16 ^{a a a b a c a d a e}	8-18
12	Black India Pale Ale	70.0 ± 1.26 ^b	50-90	42	Lager	14.0 ± 0.25 ^{a e}	8-18
13	Blonde Ale	15.0 ± 0.30 ^{z a a b a c a d a e}	15-28	43	Oatmeal Stout	38.5 ± 1.33 ^{a a a b a c a d a e}	25-40
14	Blonde Ale	15.5 ± 1.42 ^{y z a a a b a c a d}	15-28	44	Oatmeal Stout	29.0 ± 1.67 ^{j k l m}	25-40
15	Blonde Ale	15.5 ± 1.12 ^{w x y z a a a b a c a d}	15-28	45	Porter	29.5 ± 1.22 ^{x y z a a a b a c a d}	25-50
16	Brown Ale	20.5 ± 0.55 ^{v w x y z a a a b a c}	20-30	46	Porter	27.5 ± 1.08 ^{j k l m n}	25-50
17	Brown Ale	22.0 ± 0.48 ^{n o p q r s}	20-30	47	Porter	23.5 ± 0.65 ^{m n o p q}	25-50
18	Brown Ale	30.5 ± 2.31 ^{e f}	20-30	48	Porter	28.0 ± 0.72 ^{j k l m}	25-50
19	Brown Ale	33.0 ± 3.9 ^{d e}	20-30	49	Porter	27.5 ± 0.40 ^{j k l m n}	25-50
20	Brown Ale	31.0 ± 0.68 ^{i j k l}	20-30	50	Porter	25.0 ± 0.58 ^{l m n o p}	25-50
21	California Common	32.0 ± 2.47 ^{m n o p q r}	30-45	51	Porter	26.5 ± 1.24 ^{s t u v w x}	25-50
22	Cream Ale	18.5 ± 2.05 ^{q r s t u v}	8-20	52	Scottish Ale	16.5 ± 0.46 ^{a d a e}	15-30
23	Cream Ale	14.0 ± 2.49 ^{u v w x y z a a a b}	8-20	53	Stout	39.0 ± 1.31 ^{j k l m}	35-75
24	Dark Lager	21.0 ± 0.35 ^{l m n o p}	8-20	54	Stout	38.1 ± 1.92 ^{f g h}	35-75
25	Dubbel	18.5 ± 2.00 ^{q r s t u v}	15-25	55	Sweet Stout	32.0 ± 0.30 ^{i j k}	20-40
26	Golden Ale	29.0 ± 2.35 ^{j k l m}	20-45	56	Sweet Stout	28.0 ± 1.49 ^{w x y z a a a b a c a d}	20-40
27	Imperial Stout	64.5 ± 4.40 ^{b c}	50-90	57	Vienna	25.5 ± 1.42 ^{t u v w x y z}	18-30
28	Imperial Stout	72.0 ± 0.86 ^{h i j k}	50-90	58	Weissbier	11.0 ± 0.62 ^{x y z a a a b a c a d}	8-15
29	India Pale Ale	65.5 ± 2.70 ^{b c}	40-70	59	Witbier	17.0 ± 1.72 ^{a c a d a e}	8-20
30	India Pale Ale	69.0 ± 0.81 ^a	40-70	60	Witbier	19.5 ± 1.34 ^{p q r s t u}	8-20

¹ Beer brands were assigned a number (1-60).

² Beer style established by the Beer Judge Certification Program (BJCP).

³ IBU (International Bitterness Units).

⁴ Values accepted by the Beer Judge Certification Program (1-120 IBU).

Values represent means ± standard deviation. Means with different letters per column indicate significant statistical differences (Tukey, $p \leq 0.05$).

Table S5: Turbidity values of craft beer of different styles (n = 60).

Beer brands ¹	Beer style ²	Turbidity (NTU) ³	Beer brands ¹	Beer style ²	Turbidity (NTU) ³
1	American Pale Ale	35.3 ± 1.15 ^h	31	India Pale Ale	22.3 ± 2.08 ^{k¹}
2	American Pale Ale	5.0 ± 0.00 ^{ab ac ad ae af}	32	India Pale Ale	3.0 ± 0.00 ^{af ag}
3	American Pale Ale	38.3 ± 0.57 ^g	33	India Pale Ale	13.0 ± 1.00 ^{r s t}
4	American Pale Ale	4.0 ± 1.00 ^{ad ae af ag}	34	India Pale Ale	7.0 ± 0.00 ^{x y z aa ab ac}
5	American Pale Ale	10.0 ± 0.00 ^{u v w}	35	India Pale Ale	21.0 ± 0.00 ^{k l m n}
6	American Pale Ale	5.0 ± 0.00 ^{ab ac ad ae af}	36	India Pale Ale	3.3 ± 0.57 ^{ae af ag}
7	American Pale Ale	6.0 ± 0.00 ^{y z aa ab ac ad}	37	Kölsch	19.3 ± 1.52 ^{m n}
8	American Pale Ale	6.6 ± 0.57 ^{x y z aa ab ac}	38	Lager	3.0 ± 1.00 ^{af ag}
9	Barleywine	11.0 ± 0.00 ^{t u v}	39	Lager	2.0 ± 0.00 ^{ag}
10	Belgian Blond Ale	8.0 ± 0.00 ^{w x y z}	40	Lager	5.0 ± 1.00 ^{ab ac ad ae af}
11	Berliner Weisse	20.0 ± 0.00 ^{l m n}	41	Lager	11.3 ± 0.57 ^{s t u v}
12	Black India Pale Ale	25.3 ± 1.15 ^{i j}	42	Lager	8.3 ± 0.57 ^{w x y}
13	Blonde Ale	15.3 ± 0.57 ^{p q r}	43	Oatmeal Stout	13.6 ± 0.57 ^{q r s}
14	Blonde Ale	22.0 ± 0.00 ^{k l}	44	Oatmeal Stout	114.3 ± 0.57 ^b
15	Blonde Ale	5.3 ± 0.57 ^{aa ab ac ad ae af}	45	Porter	16.0 ± 1.00 ^{p q}
16	Brown Ale	4.6 ± 0.57 ^{ac ad ae af}	46	Porter	16.6 ± 0.57 ^{o p}
17	Brown Ale	7.3 ± 0.57 ^{x y z aa}	47	Porter	13.0 ± 0.00 ^{r s t}
18	Brown Ale	5.6 ± 0.57 ^{z aa ab ac ad ae}	48	Porter	56.3 ± 2.08 ^d
19	Brown Ale	19.0 ± 1.00 ^{n o}	49	Porter	12.6 ± 0.57 ^{s t}
20	Brown Ale	21.6 ± 1.52 ^{k l m}	50	Porter	4.0 ± 0.00 ^{ad ae af ag}
21	California Common	39.6 ± 0.57 ^g	51	Porter	47.0 ± 0.57 ^e
22	Cream Ale	39.3 ± 0.57 ^g	52	Scottish Ale	9.0 ± 0.00 ^{v w x}
23	Cream Ale	8.0 ± 0.00 ^{w x y z}	53	Stout	25.6 ± 0.57 ⁱ
24	Dark Lager	44.3 ± 0.57 ^f	54	Stout	7.3 ± 0.57 ^{x y z aa ab}
25	Dubbel	7.0 ± 0.57 ^{w x y z aa}	55	Sweet Stout	23.0 ± 0.00 ^{j k}
26	Golden Ale	9.0 ± 0.00 ^{v w x}	56	Sweet Stout	64.0 ± 0.00 ^c
27	Imperial Stout	12.0 ± 1.00 ^{s t u}	57	Vienna	6.3 ± 1.15 ^{y z aa ab ac ad}
28	Imperial Stout	201.3 ± 1.52 ^a	58	Weissbier	26.0 ± 0.00 ⁱ
29	India Pale Ale	10.0 ± 0.00 ^{u v w}	59	Witbier	16.3 ± 0.57 ^p
30	India Pale Ale	10.0 ± 1.00 ^{u v w}	60	Witbier	11.0 ± 0.00 ^{t u v}

¹ Beer brands were assigned a number (1-60).

² Beer style established by the Beer Judge Certification Program (BJCP).

³ NTU (Nephelometric Turbidity Units).

Values represent means ± standard deviation. Means with different letters per column indicate significant statistical differences (Tukey, $p \leq 0.05$).

Table S6: pH and acidity values of craft beer of different styles (n = 60).

Beer brands ¹	Beer style ²	pH	Acidity (mg/L) ³	Beer brands ¹	Beer style ²	pH	Acidity (mg/L) ³
1	American Pale Ale	4.06 ± 0.01 ^{u v w x}	20.76 ± 1.36 ^{j k l m n}	31	India Pale Ale	4.30 ± 0.01 ^{l m n o}	20.16 ± 1.56 ^{k l m n o}
2	American Pale Ale	3.92 ± 0.03 ^{y z a a}	18.60 ± 0.74 ^{l m n o p q}	32	India Pale Ale	4.61 ± 0.01 ^{c d e}	25.44 ± 1.81 ^{h i}
3	American Pale Ale	4.21 ± 0.02 ^{o p q r s}	22.08 ± 0.54 ^{i j k l}	33	India Pale Ale	4.63 ± 0.00 ^{c d}	20.88 ± 0.72 ^{j k l m}
4	American Pale Ale	4.23 ± 0.00 ^{o p q r s}	19.08 ± 1.29 ^{l m n o p}	34	India Pale Ale	4.54 ± 0.01 ^{d e f g}	12.72 ± 0.41 ^{s t u v w}
5	American Pale Ale	3.85 ± 0.01 ^{a a a b}	19.08 ± 1.08 ^{l m n o p}	35	India Pale Ale	3.77 ± 0.00 ^{a b a c a d}	18.72 ± 0.36 ^{l m n o p r}
6	American Pale Ale	4.23 ± 0.03 ^{o p q r}	18.84 ± 1.36 ^{l m n o p}	36	India Pale Ale	4.42 ± 0.02 ^{h i j k}	17.88 ± 0.41 ^{m n o p r}
7	American Pale Ale	4.51 ± 0.00 ^{e f g h}	10.44 ± 0.95 ^{v w x y}	37	Kölsch	4.52 ± 0.05 ^{e f g}	10.92 ± 1.15 ^{u v w x}
8	American Pale Ale	4.30 ± 0.05 ^{l m n o}	17.52 ± 0.74 ^{n o p q r}	38	Lager	3.90 ± 0.05 ^{z a a}	12.84 ± 0.54 ^{s t u v w}
9	Barleywine	4.70 ± 0.03 ^{b c}	24.24 ± 1.09 ^{h i j}	39	Lager	3.84 ± 0.01 ^{a a a b a c}	10.8 ± 0.95 ^{u v w x}
10	Belgian Blond Ale	4.29 ± 0.03 ^{l m n o}	26.52 ± 0.90 ^h	40	Lager	4.23 ± 0.01 ^{o p r s}	6.36 ± 2.16 ^{z a a}
11	Berliner Weisse	3.46 ± 0.03 ^{a e}	32.16 ± 0.90 ^{d e}	41	Lager	3.69 ± 0.03 ^{a d}	18.72 ± 0.72 ^{l m n o p q}
12	Black India Pale Ale	4.36 ± 0.03 ^{j k l m}	26.76 ± 2.16 ^{g h}	42	Lager	4.15 ± 0.06 ^{q r s t u}	14.76 ± 0.72 ^{q r s t u}
13	Blonde Ale	3.51 ± 0.00 ^{a e}	19.92 ± 0.41 ^{l m n o p}	43	Oatmeal Stout	4.15 ± 0.01 ^{q r s t u}	17.52 ± 1.45 ^{n o p q r}
14	Blonde Ale	4.11 ± 0.02 ^{s t u v w}	18.96 ± 1.98 ^{l m n o p}	44	Oatmeal Stout	5.03 ± 0.02 ^a	47.76 ± 0.54 ^a
15	Blonde Ale	4.16 ± 0.02 ^{p q r s t u}	4.92 ± 1.36 ^{a a}	45	Porter	3.53 ± 0.01 ^{a e}	38.04 ± 1.36 ^{b c}
16	Brown Ale	4.27 ± 0.03 ^{m n o p}	14.4 ± 0.95 ^{r s t u v}	46	Porter	3.91 ± 0.00 ^{z a a}	16.56 ± 0.36 ^{o p q r s}
17	Brown Ale	3.96 ± 0.03 ^{x y z}	12.36 ± 1.45 ^{t u v w}	47	Porter	4.08 ± 0.01 ^{t u v w}	27.00 ± 1.24 ^{g h}
18	Brown Ale	4.57 ± 0.01 ^{d e f}	31.80 ± 1.26 ^{d e f}	48	Porter	4.27 ± 0.01 ^{m n o p}	32.16 ± 0.54 ^{d e}
19	Brown Ale	4.38 ± 0.01 ^{i j k l}	12.72 ± 2.39 ^{s t u v w}	49	Porter	4.08 ± 0.00 ^{t u v w}	27.36 ± 1.44 ^{g h}
20	Brown Ale	3.74 ± 0.08 ^{a c a d}	16.44 ± 0.20 ^{o p q r s}	50	Porter	4.17 ± 0.00 ^{p q r s t}	18.72 ± 1.24 ^{k l m n o}
21	California Common	4.29 ± 0.01 ^{l m n o}	16.44 ± 0.20 ^{o p q r s}	51	Porter	4.02 ± 0.00 ^{w x y}	9.48 ± 1.70 ^{w x y z}
22	Cream Ale	3.84 ± 0.06 ^{a a a b a c}	27.84 ± 0.74 ^{f g h}	52	Scottish Ale	4.24 ± 0.01 ^{n o p q}	18.24 ± 0.54 ^{l m n o p q r}
23	Cream Ale	4.14 ± 0.01 ^{q r s t u}	16.44 ± 0.74 ^{o p q r s}	53	Stout	4.34 ± 0.00 ^{k l m n}	16.08 ± 1.15 ^{p q r s t}
24	Dark Lager	4.13 ± 0.02 ^{r s t u v}	17.76 ± 1.09 ^{n o p q r s}	54	Stout	4.27 ± 0.02 ^{m n o p}	27.72 ± 1.08 ^{g h}
25	Dubbel	3.92 ± 0.01 ^{y z a a}	40.68 ± 0.95 ^b	55	Sweet Stout	4.23 ± 0.00 ^{o p q r}	27.36 ± 1.90 ^{g h}
26	Golden Ale	4.36 ± 0.01 ^{j k l m n}	8.04 ± 1.45 ^{x y z a a}	56	Sweet Stout	4.03 ± 0.02 ^{v w x}	19.80 ± 0.0 ^{l m n o p}
27	Imperial Stout	4.45 ± 0.03 ^{g h i j}	37.92 ± 1.98 ^{b c}	57	Vienna	4.21 ± 0.01 ^{o p q r s}	6.72 ± 1.84 ^{y z a a}
28	Imperial Stout	4.75 ± 0.00 ^b	40.32 ± 0.62 ^b	58	Weissbier	4.06 ± 0.03 ^{u v w x}	20.64 ± 0.74 ^{j k l m n}
29	India Pale Ale	4.47 ± 0.05 ^{f g h i}	21.84 ± 0.74 ^{i j k l m}	59	Witbier	4.49 ± 0.04 ^{f g h}	30.72 ± 0.20 ^{e f g}
30	India Pale Ale	4.76 ± 0.05 ^b	24.12 ± 0.36 ^{h i j k}	60	Witbier	3.35 ± 0.05 ^{a f}	35.40 ± 0.54 ^{c d}

¹ Beer brands were assigned a number (1-60).

² Beer style established by the Beer Judge Certification Program (BJCP).

³ Values accepted by NOM-199-SCFI-2007: ≤ 10 000 mg lactic acid/L.

Values represent means ± standard deviation. Means with different letters per column indicate significant statistical differences (Tukey, p ≤ 0.05).

Table S7: Comparison between real value and predicted value of the validation data using a Dunnett's test.

Sample	Parameter	Real value	Predicted value	Grouping	Sample	Parameter	Real value	Predicted value	Grouping	Sample	Parameter	Real value	Predicted value	Grouping
1	Color	32.20	33.57	A	6	Color	8.70	7.94	A	11	Color	14.40	14.58	A
	Alcohol	4.40	4.49	A		Alcohol	6.90	6.76	A		Alcohol	5.60	5.46	A
	Bitterness	12.50	12.02	A		Bitterness	39.00	40.88	A		Bitterness	36.00	35.23	A
	Turbidity	4.60	4.35	A		Turbidity	3.00	3.45	A		Turbidity	6.00	5.42	A
	pH	4.27	4.24	A		pH	4.61	4.62	A		pH	4.51	4.50	A
	Acidity	14.40	14.28	A		Acidity	25.44	25.11	A		Acidity	10.44	10.73	A
2	Color	4.40	4.41	A	7	Color	12.20	11.67	A	12	Color	9.10	8.22	A
	Alcohol	7.00	6.89	A		Alcohol	3.70	3.95	A		Alcohol	4.00	3.97	A
	Bitterness	24.50	23.76	A		Bitterness	21.00	20.62	A		Bitterness	14.50	14.27	A
	Turbidity	5.00	5.51	A		Turbidity	10.00	10.76	A		Turbidity	20.00	19.49	A
	pH	3.92	3.91	A		pH	3.85	3.83	A		pH	3.46	3.48	A
	Acidity	18.60	19.63	A		Acidity	19.08	19.13	A		Acidity	32.16	31.01	A
3	Color	8.40	8.27	A	8	Color	4.40	4.58	A	13	Color	48.30	47.33	A
	Alcohol	3.10	2.99	A		Alcohol	3.60	3.76	A		Alcohol	4.50	4.69	A
	Bitterness	41.00	40.20	A		Bitterness	10.00	10.46	A		Bitterness	25.00	24.73	A
	Turbidity	4.23	4.29	A		Turbidity	15.30	14.84	A		Turbidity	4.00	4.17	A
	pH	19.08	19.70	A		pH	3.51	3.54	A		pH	4.17	4.17	A
	Acidity	4.00	4.52	A		Acidity	18.92	18.56	A		Acidity	18.72	19.26	A
4	Color	2.20	2.20	A	9	Color	9.30	10.06	A	14	Color	16.16	16.67	A
	Alcohol	2.10	2.45	A		Alcohol	4.60	4.85	A		Alcohol	3.50	3.81	A
	Bitterness	26.50	27.50	A		Bitterness	10.50	10.90	A		Bitterness	23.00	24.43	A
	Turbidity	5.00	5.29	A		Turbidity	22.00	21.03	A		Turbidity	39.60	40.75	A
	pH	4.23	4.26	A		pH	4.11	4.14	A		pH	4.29	4.23	A
	Acidity	6.36	7.29	A		Acidity	19.96	19.71	A		Acidity	16.44	15.89	A
5	Color	9.80	9.64	A	10	Color	56.00	55.61	A	15	Color	18.00	17.08	A
	Alcohol	6.10	6.00	A		Alcohol	5.00	5.06	A		Alcohol	4.50	4.40	A
	Bitterness	47.50	47.23	A		Bitterness	12.00	12.46	A		Bitterness	25.00	24.11	A
	Turbidity	22.30	23.13	A		Turbidity	23.00	22.72	A		Turbidity	44.30	43.94	A
	pH	4.30	4.34	A		pH	4.03	4.06	A		pH	4.13	4.11	A
	Acidity	20.16	19.75	A		Acidity	19.80	19.52	A		Acidity	17.76	16.61	A

Different letters per row indicate significant statistical differences ($p \leq 0.05$) for each parameter per sample.