

Nutritional evaluation

Note: The values of nutritional evaluation are based on dry weight except for moisture of beetroot

Sr No.	Parameter	Beetroot powder	Laddoo	Cake	Cookies
1	Moisture	87.07±3.96	1.33±0.1	0.79±0.03	0.77±0.06
2	Ash	6.27±0.22	1.42±0.03	4.17±0.13	1.28±0.05
3	Crude protein	13.06±0.05	6.52±0.15	10.69±0.1	5.61±0.05
4	Crude fat	0.92±0.09	27.95±0.18	10.78±0.32	27.88±0.3
5	Crude fibre	5.01±0.16	2.73±0.2	1.28±0.04	1.57±0.09
6	Carbohydrates	65.68	60.05	72.28	62.90
7	Energy	323.20	517.83	428.96	524.96
8	Total sugars	214.84±3.59	180.99±6.32	216.15±2.71	177.6±2.19
9	Reducing sugars	116.89±3.25	65.78±3.17	91.5±1.65	56.95±2.13
10	Non reducing suga	97.96±6.07	115.21±7.41	124.64±2.24	120.65±1.82
11	Dietary fibre	57.4±4.24	10.76±0.35	4.17±0.32	3.8±0.37
12	B-carotene	3.93±0.35	4.29±0.25	5.77±0.35	5.54±0.37
13	Iron	3.72±0.15	3.5±0.12	1.39±0.22	2.67±0.14
14	Magnesium	82.44±1.79	120.65±2.14	84.39±0.68	84±1.02
15	Phosphorus	78±2.65	210±5.77	112.33±4.06	114.67±1.45
16	Calcium	20.33±1.45	19.83±1.01	24.67±0.88	38.84±1.93
17	Available iron	0.19±0.01	2.85±0.16	0.43±0.02	0.66±0.01
18	Polyphenol	23.45±0.82	19.96±1.3	22.21±1.53	19.96±0.97
19	Phytic acid	45.4±1.1	242.04±3.46	25.35±1.93	42.08±2.35
20	Oxalates	365.8±4.08	102.7±1.55	23.96±0.76	72.56±1.62
21	DPPH	139.17±3.15	78.56±3.48	107.63±3.69	100.52±3.67
22	FRAP	192.74±3.68	172.03±1.76	181.9±3.67	181.26±2.02
23	TAA	43.02±4.07	32.94±3.12	38.6±2.94	27.71±2.59
24	ABTS	204.59±3.36	54.53±3.57	90.7±4.31	93.31±6.87

Organoleptic evaluation

Sr no	Product	Colour	Appearanc	Aroma	Texture	Taste	Overall acceptability
1	Cake	9	9	9	9	9	9
2	Cake	9	9	9	9	9	9
3	Cake	9	9	9	7	7.5	8.3
4	Cake	9	9	9	9	9	9
5	Cake	9	9	9	9	9	9
6	Cake	9	9	9	9	9	9
7	Cake	9	9	9	9	9	9
8	Cake	9	9	9	9	9	9
9	Cake	9	9	9	9	9	9
10	Cake	9	9	9	9	9	9
11	Cake	9	9	9	9	9	9
12	Cake	9	8	9	9	9	8.8
13	Cake	9	9	9	9	9	9
14	Cake	9	9	9	9	9	9
15	Cake	9	9	9	9	9	9
16	Cake	9	9	9	9	9	9
17	Cake	9	9	9	9	9	9
18	Cake	9	9	9	9	9	9
19	Cake	9	9	9	9	9	9
20	Cake	9	9	9	9	9	9
21	Cake	9	9	9	9	9	9
22	Cake	9	9	9	9	9	9
23	Cake	9	9	9	9	9	9
24	Cake	9	9	9	9	9	9
25	Cake	9	9	9	9	9	9
26	Cake	9	9	9	8	9	8.8
27	Cake	9	9	9	9	9	9
28	Cake	9	9	9	9	9	9
29	Cake	9	9	9	9	9	9
30	Cake	9	9	9	9	9	9
31	Cake	9	9	9	9	9	9
32	Cake	9	9	9	9	9	9
33	Cake	9	9	9	9	9	9
34	Cake	9	9	9	9	9	9
35	Cake	9	9	9	9	9	9
36	Cake	9	9	9	8	9	8.8
37	Cake	9	9	9	9	9	9
38	Cake	9	9	9	9	9	9
39	Cake	9	9	9	9	9	9
40	Cake	9	9	9	9	9	9
41	Cake	9	9	9	9	9	9
42	Cake	9	9	9	9	9	9
43	Cake	9	9	9	9	9	9
44	Cake	9	9	9	9	9	9
45	Cake	9	9	9	9	9	9

46	Cake	9	9	9	9	9	9
47	Cake	9	9	9	9	9	9
48	Cake	9	9	9	9	9	9
49	Cake	9	9	9	9	9	9
50	Cake	9	9	9	9	9	9
	Mean	9	8.98	9	8.92	8.97	8.974
	SE	0.00	0.02	0.00	0.05	0.03	0.02
1	Cookies	9	9	9	9	9	9
2	Cookies	9	9	9	8	9	8.8
3	Cookies	9	8.5	9	9	9	8.9
4	Cookies	9	9	9	8	8	8.6
5	Cookies	9	9	9	9	9	9
6	Cookies	9	9	9	9	9	9
7	Cookies	9	9	9	9	9	9
8	Cookies	9	9	9	9	9	9
9	Cookies	9	9	9	9	9	9
10	Cookies	9	9	9	9	9	9
11	Cookies	9	9	9	9	9	9
12	Cookies	9	9	9	9	9	9
13	Cookies	9	9	9	9	9	9
14	Cookies	9	9	9	9	9	9
15	Cookies	9	9	9	9	9	9
16	Cookies	9	9	9	9	9	9
17	Cookies	9	9	9	8	9	8.8
18	Cookies	9	9	9	9	9	9
19	Cookies	9	9	9	9	9	9
20	Cookies	9	9	9	9	9	9
21	Cookies	9	9	9	9	9	9
22	Cookies	9	9	9	9	9	9
23	Cookies	9	9	9	9	9	9
24	Cookies	9	8	9	9	9	8.8
25	Cookies	9	9	9	9	9	9
26	Cookies	9	9	9	9	9	9
27	Cookies	9	9	9	9	9	9
28	Cookies	9	9	9	9	9	9
29	Cookies	9	9	9	9	9	9
30	Cookies	9	9	9	9	9	9
31	Cookies	9	9	9	9	9	9
32	Cookies	9	9	9	9	9	9
33	Cookies	9	9	9	9	9	9
34	Cookies	9	9	9	9	9	9
35	Cookies	9	9	9	9	9	9
36	Cookies	9	9	9	9	9	9
37	Cookies	9	9	9	9	9	9
38	Cookies	9	9	9	9	9	9
39	Cookies	9	9	9	9	9	9
40	Cookies	9	9	9	8	9	8.8
41	Cookies	9	9	9	9	9	9
42	Cookies	9	9	9	9	9	9

43 Cookies	9	9	8	9	9	8.8
44 Cookies	9	9	9	9	9	9
45 Cookies	9	9	9	9	9	9
46 Cookies	9	9	9	9	9	9
47 Cookies	9	9	9	9	9	9
48 Cookies	9	9	9	9	9	9
49 Cookies	9	9	9	9	9	9
50 Cookies	9	9	9	9	9	9
Mean	9	8.97	8.98	8.92	8.98	8.97
SE	0.00	0.02	0.02	0.04	0.02	0.01

1 Ladoo	9	9	9	9	9	9
2 Ladoo	9	9	9	9	9	9
3 Ladoo	9	9	9	9	9	9
4 Ladoo	9	9	9	9	9	9
5 Ladoo	9	9	9	9	9	9
6 Ladoo	9	9	9	9	9	9
7 Ladoo	9	9	9	9	9	9
8 Ladoo	9	9	9	9	9	9
9 Ladoo	9	9	9	9	9	9
10 Ladoo	9	9	9	9	9	9
11 Ladoo	9	9	9	9	9	9
12 Ladoo	9	9	9	9	9	9
13 Ladoo	9	9	9	9	9	9
14 Ladoo	9	9	9	9	9	9
15 Ladoo	9	9	9	9	9	9
16 Ladoo	9	9	9	9	9	9
17 Ladoo	9	9	9	9	9	9
18 Ladoo	9	9	9	9	9	9
19 Ladoo	9	9	9	9	9	9
20 Ladoo	9	9	9	9	9	9
21 Ladoo	9	9	9	9	9	9
22 Ladoo	9	9	9	9	9	9
23 Ladoo	9	9	9	9	9	9
24 Ladoo	9	9	9	9	9	9
25 Ladoo	9	9	9	9	9	9
26 Ladoo	9	9	9	9	9	9
27 Ladoo	9	9	9	9	9	9
28 Ladoo	9	9	9	9	9	9
29 Ladoo	9	9	9	9	9	9
30 Ladoo	9	9	9	9	9	9
31 Ladoo	9	9	9	9	9	9
32 Ladoo	9	9	9	9	9	9
33 Ladoo	9	9	9	9	9	9
34 Ladoo	9	9	9	9	9	9
35 Ladoo	9	9	9	9	9	9
36 Ladoo	9	9	9	9	9	9
37 Ladoo	9	9	9	9	9	9
38 Ladoo	9	9	9	9	9	9
39 Ladoo	9	9	9	9	9	9

40 Ladoo	9	9	9	9	9	9
41 Ladoo	9	9	9	9	9	9
42 Ladoo	9	9	9	9	9	9
43 Ladoo	9	9	9	9	9	9
44 Ladoo	9	9	9	9	9	9
45 Ladoo	9	9	9	9	9	9
46 Ladoo	9	9	9	9	9	9
47 Ladoo	9	9	9	9	9	9
48 Ladoo	9	9	9	9	9	9
49 Ladoo	9	9	9	9	9	9
50 Ladoo	9	9	9	9	9	9
Mean	9	9	9	9	9	9
SE	0	0	0	0	0	0

