

1.6.

Order	Volume (cm ³)	Surface Area (cm ²)	Cumulative Volume (cm ³)	Cumulative Surface Area (cm ²)
0	30.54	67.86	30.54	67.86
1	11.13	36.49	41.66	104.34
2	4.11	19.82	45.78	124.2
3	1.50	10.70	47.27	134.9
4	3.23	28.72	50.51	163.6
5	3.29	37.65	53.80	201.2
6	3.54	50.67	57.35	251.9
7	4.04	70.29	61.39	322.2
8	4.45	95.74	65.84	418.0
9	5.15	133.76	70.99	551.7
10	6.25	192.38	77.24	744.1
11	7.45	273.51	84.70	1018
12	9.58	403.41	94.27	1421
13	11.68	569.79	106.0	1991
14	16.21	876.05	122.2	2867
15	22.42	1358.86	144.6	4226
16	30.57	2038.28	175.2	6264
17	42.33	3135.25	217.5	9399
18	60.223	4817.76	277.7	14217
19	90.05	7663.95	367.8	21881
20	138.42	12303.82	506.2	34185
21	213.18	19831.06	719.4	54015
22	326.72	31874.64	1046.	85890
23	553.75	54024.81	1600	139915

1.5. $V = \pi R^2 L$ and the $S = 2\pi RL$ where R is the vessel radius and L is the length

Order	volume, cm ³	surface area, cm ²	cumulative volume, cm ³	cumulative surface area, cm ²
1	0.0158	26.27	0.0158	26.27
2	0.03885	35.32	0.05	61.59
3	0.05738	31.44	0.11	92.99
4	0.09219	30.23	0.20	123.21
5	0.12788	26.64	0.33	149.86
6	0.20487	23.28	0.54	173.14
7	0.20733	15.56	0.74	188.70
8	0.24132	11.03	0.99	199.73
9	0.31010	8.17	1.30	207.89
10	0.23046	3.71	1.53	211.60
11	0.50671	3.99	2.03	215.59