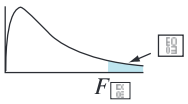
TABLE 8

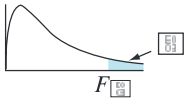
Percentage points of the F distribution (df_2 between 1 and 6)



		df_1									
df_2	α	1	2	3	4	5	6	7	8	9	10
1	.25	5.83	7.50	8.20	8.58	8.82	8.98	9.10	9.19	9.26	9.32
	.10	39.86	49.50	53.59	55.83	57.24	58.20	58.91	59.44	59.86	60.19
	.05	161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5	241.9
	.025	647.8	799.5	864.2	899.6	921.8	937.1	948.2	956.7	963.3	968.6
	.01	4052	5000	5403	5625	5764	5859	5928	5981	6022	6056
2	.25	2.57	3.00	3.15	3.23	3.28	3.31	3.34	3.35	3.37	3.38
	.10	8.53	9.00	9.16	9.24	9.29	9.33	9.35	9.37	9.38	9.39
	.05	18.51	19.00	19.16	19.25	19.30	19.33	19.35	19.37	19.38	19.40
	.025	38.51	39.00	39.17	39.25	39.30	39.33	39.36	39.37	39.39	39.40
	.01	98.50	99.00	99.17	99.25	99.30	99.33	99.36	99.37	99.39	99.40
	.005	198.5	199.0	199.2	199.2	199.3	199.3	199.4	199.4	199.4	199.4
	.001	998.5	999.0	999.2	999.2	999.3	999.3	999.4	999.4	999.4	999.4
3	.25	2.02	2.28	2.36	2.39	2.41	2.42	2.43	2.44	2.44	2.44
	.10	5.54	5.46	5.39	5.34	5.31	5.28	5.27	5.25	5.24	5.23
	.05	10.13	9.55	9.28	9.12	9.01	8.94	8.89	8.85	8.81	8.79
	.025	17.44	16.04	15.44	15.10	14.88	14.73	14.62	14.54	14.47	14.42
	.01	34.12	30.82	29.46	28.71	28.24	27.91	27.67	27.49	27.35	27.23
	.005	55.55	49.80	47.47	46.19	45.39	44.84	44.43	44.13	43.88	43.69
	.001	167.0	148.5	141.1	137.1	134.6	132.8	131.6	130.6	129.9	129.2
4	.25	1.81	2.00	2.05	2.06	2.07	2.08	2.08	2.08	2.08	2.08
	.10	4.54	4.32	4.19	4.11	4.05	4.01	3.98	3.95	3.94	3.92
	.05	7.71	6.94	6.59	6.39	6.26	6.16	6.09	6.04	6.00	5.96
	.025	12.22	10.65	9.98	9.60	9.36	9.20	9.07	8.98	8.90	8.84
	.01	21.20	18.00	16.69	15.98	15.52	15.21	14.98	14.80	14.66	14.55
	.005	31.33	26.28	24.26	23.15	22.46	21.97	21.62	21.35	21.14	20.97
	.001	74.14	61.25	56.18	53.44	51.71	50.53	49.66	49.00	48.47	48.05
5	.25	1.69	1.85	1.88	1.89	1.89	1.89	1.89	1.89	1.89	1.89
	.10	4.06	3.78	3.62	3.52	3.45	3.40	3.37	3.34	3.32	3.30
	.05	6.61	5.79	5.41	5.19	5.05	4.95	4.88	4.82	4.77	4.74
	.025	10.01	8.43	7.76	7.39	7.15	6.98	6.85	6.76	6.68	6.62
	.01	16.26	13.27	12.06	11.39	10.97	10.67	10.46	10.29	10.16	10.05
	.005	22.78	18.31	16.53	15.56	14.94	14.51	14.20	13.96	13.77	13.62
	.001	47.18	37.12	33.20	31.09	29.75	28.83	28.16	27.65	27.24	26.92
6	.25	1.62	1.76	1.78	1.79	1.79	1.78	1.78	1.78	1.77	1.77
	.10	3.78	3.46	3.29	3.18	3.11	3.05	3.01	2.98	2.96	2.94
	.05	5.99	5.14	4.76	4.53	4.39	4.28	4.21	4.15	4.10	4.06
	.025	8.81	7.26	6.60	6.23	5.99	5.82	5.70	5.60	5.52	5.46
	.01	13.75	10.92	9.78	9.15	8.75	8.47	8.26	8.10	7.98	7.87
	.005	18.63	14.54	12.92	12.03	11.46	11.07	10.79	10.57	10.39	10.25
	.001	35.51	27.00	23.70	21.92	20.80	20.03	19.46	19.03	18.69	18.41

TABLE 8

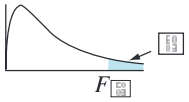
Percentage points of the F distribution (df_2 between 7 and 12)



		df_1									
df_2	α	1	2	3	4	5	6	7	8	9	10
7	.25	1.57	1.70	1.72	1.72	1.71	1.71	1.70	1.70	1.69	1.69
	.10	3.59	3.26	3.07	2.96	2.88	2.83	2.78	2.75	2.72	2.70
	.05	5.59	4.74	4.35	4.12	3.97	3.87	3.79	3.73	3.68	3.64
	.025	8.07	6.54	5.89	5.52	5.29	5.12	4.99	4.90	4.82	4.76
	.01	12.25	9.55	8.45	7.85	7.46	7.19	6.99	6.84	6.72	6.62
	.005	16.24	12.40	10.88	10.05	9.52	9.16	8.89	8.68	8.51	8.38
	.001	29.25	21.69	18.77	17.20	16.21	15.52	15.02	14.63	14.33	14.08
8	.25	1.54	1.66	1.67	1.66	1.66	1.65	1.64	1.64	1.63	1.63
	.10	3.46	3.11	2.92	2.81	2.73	2.67	2.62	2.59	2.56	2.54
	.05	5.32	4.46	4.07	3.84	3.69	3.58	3.50	3.44	3.39	3.35
	.025	7.57	6.06	5.42	5.05	4.82	4.65	4.53	4.43	4.36	4.30
	.01	11.26	8.65	7.59	7.01	6.63	6.37	6.18	6.03	5.91	5.81
	.005	14.69	11.04	9.60	8.81	8.30	7.95	7.69	7.50	7.34	7.21
	.001	25.41	18.49	15.83	14.39	13.48	12.86	12.40	12.05	11.77	11.54
9	.25	1.51	1.62	1.63	1.63	1.62	1.61	1.60	1.60	1.59	1.59
	.10	3.36	3.01	2.81	2.69	2.61	2.55	2.51	2.47	2.44	2.42
	.05	5.12	4.26	3.86	3.63	3.48	3.37	3.29	3.23	3.18	3.14
	.025	7.21	5.71	5.08	4.72	4.48	4.32	4.20	4.10	4.03	3.96
	.01	10.56	8.02	6.99	6.42	6.06	5.80	5.61	5.47	5.35	5.26
	.005	13.61	10.11	8.72	7.96	7.47	7.13	6.88	6.69	6.54	6.42
	.001	22.86	16.39	13.90	12.56	11.71	11.13	10.70	10.37	10.11	9.89
10	.25	1.49	1.60	1.60	1.59	1.59	1.58	1.57	1.56	1.56	1.55
	.10	3.29	2.92	2.73	2.61	2.52	2.46	2.41	2.38	2.35	2.32
	.05	4.96	4.10	3.71	3.48	3.33	3.22	3.14	3.07	3.02	2.98
	.025	6.94	5.46	4.83	4.47	4.24	4.07	3.95	3.85	3.78	3.72
	.01	10.04	7.56	6.55	5.99	5.64	5.39	5.20	5.06	4.94	4.85
	.005	12.83	9.43	8.08	7.34	6.87	6.54	6.30	6.12	5.97	5.85
	.001	21.04	14.91	12.55	11.28	10.48	9.93	9.52	9.20	8.96	8.75
11	.25	1.47	1.58	1.58	1.57	1.56	1.55	1.54	1.53	1.53	1.52
	.10	3.23	2.86	2.66	2.54	2.45	2.39	2.34	2.30	2.27	2.25
	.05	4.84	3.98	3.59	3.36	3.20	3.09	3.01	2.95	2.90	2.85
	.025	6.72	5.26	4.63	4.28	4.04	3.88	3.76	3.66	3.59	3.53
	.01	9.65	7.21	6.22	5.67	5.32	5.07	4.89	4.74	4.63	4.54
	.005	12.23	8.91	7.60	6.88	6.42	6.10	5.86	5.68	5.54	5.42
	.001	19.69	13.81	11.56	10.35	9.58	9.05	8.66	8.35	8.12	7.92
12	.25	1.46	1.56	1.56	1.55	1.54	1.53	1.52	1.51	1.51	1.50
	.10	3.18	2.81	2.61	2.48	2.39	2.33	2.28	2.24	2.21	2.19
	.05	4.75	3.89	3.49	3.26	3.11	3.00	2.91	2.85	2.80	2.75
	.025	6.55	5.10	4.47	4.12	3.89	3.73	3.61	3.51	3.44	3.37
	.01	9.33	6.93	5.95	5.41	5.06	4.82	4.64	4.50	4.39	4.30
	.005	11.75	8.51	7.23	6.52	6.07	5.76	5.52	5.35	5.20	5.09
	.001	18.64	12.97	10.80	9.63	8.89	8.38	8.00	7.71	7.48	7.29

TABLE 8

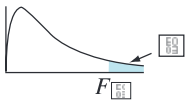
Percentage points of the F distribution (df_2 between 13 and 18)



		df_1									
df_2	α	1	2	3	4	5	6	7	8	9	10
13	.25	1.45	1.55	1.55	1.53	1.52	1.51	1.50	1.49	1.49	1.48
	.10	3.14	2.76	2.56	2.43	2.35	2.28	2.23	2.20	2.16	2.14
	.05	4.67	3.81	3.41	3.18	3.03	2.92	2.83	2.77	2.71	2.67
	.025	6.41	4.97	4.35	4.00	3.77	3.60	3.48	3.39	3.31	3.25
	.01	9.07	6.70	5.74	5.21	4.86	4.62	4.44	4.30	4.19	4.10
	.005	11.37	8.19	6.93	6.23	5.79	5.48	5.25	5.08	4.94	4.82
	.001	17.82	12.31	10.21	9.07	8.35	7.86	7.49	7.21	6.98	6.80
14	.25	1.44	1.53	1.53	1.52	1.51	1.50	1.49	1.48	1.47	1.46
	.10	3.10	2.73	2.52	2.39	2.31	2.24	2.19	2.15	2.12	2.10
	.05	4.60	3.74	3.34	3.11	2.96	2.85	2.76	2.70	2.65	2.60
	.025	6.30	4.86	4.24	3.89	3.66	3.50	3.38	3.29	3.21	3.15
	.01	8.86	6.51	5.56	5.04	4.69	4.46	4.28	4.14	4.03	3.94
	.005	11.06	7.92	6.68	6.00	5.56	5.26	5.03	4.86	4.72	4.60
	.001	17.14	11.78	9.73	8.62	7.92	7.44	7.08	6.80	6.58	6.40
15	.25	1.43	1.52	1.52	1.51	1.49	1.48	1.47	1.46	1.46	1.45
	.10	3.07	2.70	2.49	2.36	2.27	2.21	2.16	2.12	2.09	2.06
	.05	4.54	3.68	3.29	3.06	2.90	2.79	2.71	2.64	2.59	2.54
	.025	6.20	4.77	4.15	3.80	3.58	3.41	3.29	3.20	3.12	3.06
	.01	8.68	6.36	5.42	4.89	4.56	4.32	4.14	4.00	3.89	3.80
	.005	10.80	7.70	6.48	5.80	5.37	5.07	4.85	4.67	4.54	4.42
	.001	16.59	11.34	9.34	8.25	7.57	7.09	6.74	6.47	6.26	6.08
16	.25	1.42	1.51	1.51	1.50	1.48	1.47	1.46	1.45	1.44	1.44
	.10	3.05	2.67	2.46	2.33	2.24	2.18	2.13	2.09	2.06	2.03
	.05	4.49	3.63	3.24	3.01	2.85	2.74	2.66	2.59	2.54	2.49
	.025	6.12	4.69	4.08	3.73	3.50	3.34	3.22	3.12	3.05	2.99
	.01	8.53	6.23	5.29	4.77	4.44	4.20	4.03	3.89	3.78	3.69
	.005	10.58	7.51	6.30	5.64	5.21	4.91	4.69	4.52	4.38	4.27
	.001	16.12	10.97	9.01	7.94	7.27	6.80	6.46	6.19	5.98	5.81
17	.25	1.42	1.51	1.50	1.49	1.47	1.46	1.45	1.44	1.43	1.43
	.10	3.03	2.64	2.44	2.31	2.22	2.15	2.10	2.06	2.03	2.00
	.05	4.45	3.59	3.20	2.96	2.81	2.70	2.61	2.55	2.49	2.45
	.025	6.04	4.62	4.01	3.66	3.44	3.28	3.16	3.06	2.98	2.92
	.01	8.40	6.11	5.18	4.67	4.34	4.10	3.93	3.79	3.68	3.59
	.005	10.38	7.35	6.16	5.50	5.07	4.78	4.56	4.39	4.25	4.14
	.001	15.72	10.66	8.73	7.68	7.02	6.56	6.22	5.96	5.75	5.58
18	.25	1.41	1.50	1.49	1.48	1.46	1.45	1.44	1.43	1.42	1.42
	.10	3.01	2.62	2.42	2.29	2.20	2.13	2.08	2.04	2.00	1.98
	.05	4.41	3.55	3.16	2.93	2.77	2.66	2.58	2.51	2.46	2.41
	.025	5.98	4.56	3.95	3.61	3.38	3.22	3.10	3.01	2.93	2.87
	.01	8.29	6.01	5.09	4.58	4.25	4.01	3.84	3.71	3.60	3.51
	.005	10.22	7.21	6.03	5.37	4.96	4.66	4.44	4.28	4.14	4.03
	.001	15.38	10.39	8.49	7.46	6.81	6.35	6.02	5.76	5.56	5.39

TABLE 8

Percentage points of the F distribution (df_2 between 19 and 24)



		df_1									
df_2	α	1	2	3	4	5	6	7	8	9	10
19	.25	1.41	1.49	1.49	1.47	1.46	1.44	1.43	1.42	1.41	1.41
	.10	2.99	2.61	2.40	2.27	2.18	2.11	2.06	2.02	1.98	1.96
	.05	4.38	3.52	3.13	2.90	2.74	2.63	2.54	2.48	2.42	2.38
	.025	5.92	4.51	3.90	3.56	3.33	3.17	3.05	2.96	2.88	2.82
	.01	8.18	5.93	5.01	4.50	4.17	3.94	3.77	3.63	3.52	3.43
	.005	10.07	7.09	5.92	5.27	4.85	4.56	4.34	4.18	4.04	3.93
	.001	15.08	10.16	8.28	7.27	6.62	6.18	5.85	5.59	5.39	5.22
20	.25	1.40	1.49	1.48	1.47	1.45	1.44	1.43	1.42	1.41	1.40
	.10	2.97	2.59	2.38	2.25	2.16	2.09	2.04	2.00	1.96	1.94
	.05	4.35	3.49	3.10	2.87	2.71	2.60	2.51	2.45	2.39	2.35
	.025	5.87	4.46	3.86	3.51	3.29	3.13	3.01	2.91	2.84	2.77
	.01	8.10	5.85	4.94	4.43	4.10	3.87	3.70	3.56	3.46	3.37
	.005	9.94	6.99	5.82	5.17	4.76	4.47	4.26	4.09	3.96	3.85
	.001	14.82	9.95	8.10	7.10	6.46	6.02	5.69	5.44	5.24	5.08
21	.25	1.40	1.48	1.48	1.46	1.44	1.43	1.42	1.41	1.40	1.39
	.10	2.96	2.57	2.36	2.23	2.14	2.08	2.02	1.98	1.95	1.92
	.05	4.32	3.47	3.07	2.84	2.68	2.57	2.49	2.42	2.37	2.32
	.025	5.83	4.42	3.82	3.48	3.25	3.09	2.97	2.87	2.80	2.73
	.01	8.02	5.78	4.87	4.37	4.04	3.81	3.64	3.51	3.40	3.31
	.005	9.83	6.89	5.73	5.09	4.68	4.39	4.18	4.01	3.88	3.77
	.001	14.59	9.77	7.94	6.95	6.32	5.88	5.56	5.31	5.11	4.95
22	.25	1.40	1.48	1.47	1.45	1.44	1.42	1.41	1.40	1.39	1.39
	.10	2.95	2.56	2.35	2.22	2.13	2.06	2.01	1.97	1.93	1.90
	.05	4.30	3.44	3.05	2.82	2.66	2.55	2.46	2.40	2.34	2.30
	.025	5.79	4.38	3.78	3.44	3.22	3.05	2.93	2.84	2.76	2.70
	.01	7.95	5.72	4.82	4.31	3.99	3.76	3.59	3.45	3.35	3.26
	.005	9.73	6.81	5.65	5.02	4.61	4.32	4.11	3.94	3.81	3.70
	.001	14.38	9.61	7.80	6.81	6.19	5.76	5.44	5.19	4.99	4.83
23	.25	1.39	1.47	1.47	1.45	1.43	1.42	1.41	1.40	1.39	1.38
	.10	2.94	2.55	2.34	2.21	2.11	2.05	1.99	1.95	1.92	1.89
	.05	4.28	3.42	3.03	2.80	2.64	2.53	2.44	2.37	2.32	2.27
	.025	5.75	4.35	3.75	3.41	3.18	3.02	2.90	2.81	2.73	2.67
	.01	7.88	5.66	4.76	4.26	3.94	3.71	3.54	3.41	3.30	3.21
	.005	9.63	6.73	5.58	4.95	4.54	4.26	4.05	3.88	3.75	3.64
	.001	14.20	9.47	7.67	6.70	6.08	5.65	5.33	5.09	4.89	4.73
24	.25	1.39	1.47	1.46	1.44	1.43	1.41	1.40	1.39	1.38	1.38
	.10	2.93	2.54	2.33	2.19	2.10	2.04	1.98	1.94	1.91	1.88
	.05	4.26	3.40	3.01	2.78	2.62	2.51	2.42	2.36	2.30	2.25
	.025	5.72	4.32	3.72	3.38	3.15	2.99	2.87	2.78	2.70	2.64
	.01	7.82	5.61	4.72	4.22	3.90	3.67	3.50	3.36	3.26	3.17
	.005	9.55	6.66	5.52	4.89	4.49	4.20	3.99	3.83	3.69	3.59
	.001	14.03	9.34	7.55	6.59	5.98	5.55	5.23	4.99	4.80	4.64

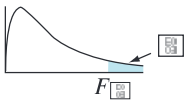


TABLE 8

Percentage points of the F distribution (df_2 between 25 and 30)

		df_1									
df_2	α	1	2	3	4	5	6	7	8	9	10
25	.25	1.39	1.47	1.46	1.44	1.42	1.41	1.40	1.39	1.38	1.37
	.10	2.92	2.53	2.32	2.18	2.09	2.02	1.97	1.93	1.89	1.87
	.05	4.24	3.39	2.99	2.76	2.60	2.49	2.40	2.34	2.28	2.24
	.025	5.69	4.29	3.69	3.35	3.13	2.97	2.85	2.75	2.68	2.61
	.01	7.77	5.57	4.68	4.18	3.85	3.63	3.46	3.32	3.22	3.13
	.005	9.48	6.60	5.46	4.84	4.43	4.15	3.94	3.78	3.64	3.54
	.001	13.88	9.22	7.45	6.49	5.89	5.46	5.15	4.91	4.71	4.56
26	.25	1.38	1.46	1.45	1.44	1.42	1.41	1.39	1.38	1.37	1.37
	.10	2.91	2.52	2.31	2.17	2.08	2.01	1.96	1.92	1.88	1.86
	.05	4.23	3.37	2.98	2.74	2.59	2.47	2.39	2.32	2.27	2.22
	.025	5.66	4.27	3.67	3.33	3.10	2.94	2.82	2.73	2.65	2.59
	.01	7.72	5.53	4.64	4.14	3.82	3.59	3.42	3.29	3.18	3.09
	.005	9.41	6.54	5.41	4.79	4.38	4.10	3.89	3.73	3.60	3.49
	.001	13.74	9.12	7.36	6.41	5.80	5.38	5.07	4.83	4.64	4.48
27	.25	1.38	1.46	1.45	1.43	1.42	1.40	1.39	1.38	1.37	1.36
	.10	2.90	2.51	2.30	2.17	2.07	2.00	1.95	1.91	1.87	1.85
	.05	4.21	3.35	2.96	2.73	2.57	2.46	2.37	2.31	2.25	2.20
	.025	5.63	4.24	3.65	3.31	3.08	2.92	2.80	2.71	2.63	2.57
	.01	7.68	5.49	4.60	4.11	3.78	3.56	3.39	3.26	3.15	3.06
	.005	9.34	6.49	5.36	4.74	4.34	4.06	3.85	3.69	3.56	3.45
	.001	13.61	9.02	7.27	6.33	5.73	5.31	5.00	4.76	4.57	4.41
28	.25	1.38	1.46	1.45	1.43	1.41	1.40	1.39	1.38	1.37	1.36
	.10	2.89	2.50	2.29	2.16	2.06	2.00	1.94	1.90	1.87	1.84
	.05	4.20	3.34	2.95	2.71	2.56	2.45	2.36	2.29	2.24	2.19
	.025	5.61	4.22	3.63	3.29	3.06	2.90	2.78	2.69	2.61	2.55
	.01	7.64	5.45	4.57	4.07	3.75	3.53	3.36	3.23	3.12	3.03
	.005	9.28	6.44	5.32	4.70	4.30	4.02	3.81	3.65	3.52	3.41
	.001	13.50	8.93	7.19	6.25	5.66	5.24	4.93	4.69	4.50	4.35
29	.25	1.38	1.45	1.45	1.43	1.41	1.40	1.38	1.37	1.36	1.35
	.10	2.89	2.50	2.28	2.15	2.06	1.99	1.93	1.89	1.86	1.83
	.05	4.18	3.33	2.93	2.70	2.55	2.43	2.35	2.28	2.22	2.18
	.025	5.59	4.20	3.61	3.27	3.04	2.88	2.76	2.67	2.59	2.53
	.01	7.60	5.42	4.54	4.04	3.73	3.50	3.33	3.20	3.09	3.00
	.005	9.23	6.40	5.28	4.66	4.26	3.98	3.77	3.61	3.48	3.38
	.001	13.39	8.85	7.12	6.19	5.59	5.18	4.87	4.64	4.45	4.29
30	.25	1.38	1.45	1.44	1.42	1.41	1.39	1.38	1.37	1.36	1.35
	.10	2.88	2.49	2.28	2.14	2.05	1.98	1.93	1.88	1.85	1.82
	.05	4.17	3.32	2.92	2.69	2.53	2.42	2.33	2.27	2.21	2.16
	.025	5.57	4.18	3.59	3.25	3.03	2.87	2.75	2.65	2.57	2.51
	.01	7.56	5.39	4.51	4.02	3.70	3.47	3.30	3.17	3.07	2.98
	.005	9.18	6.35	5.24	4.62	4.23	3.95	3.74	3.58	3.45	3.34
	.001	13.29	8.77	7.05	6.12	5.53	5.12	4.82	4.58	4.39	4.24

Source: Computed by P. J. Hildebrand.

KUAT TARIK

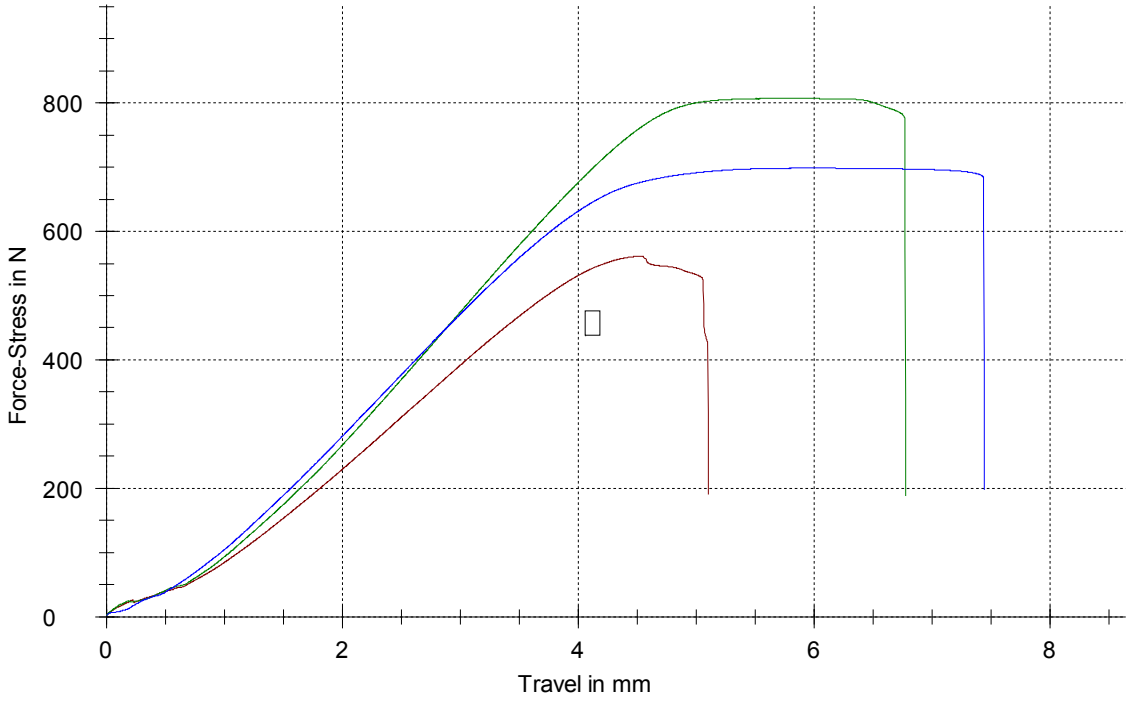
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	1	57,251	5,10
	2	82,296	6,78
	3	71,251	7,44
	✞4	93,299	5,89
	✞5	84,707	6,02
	✞6	100,113	7,37
	✞7	114,350	5,37
	✞8	113,778	7,34
	✞9	111,019	6,71
	✞10	104,068	5,83
	✞11	101,639	7,62
	✞12	92,519	8,12
	✞13	116,829	6,97
	✞14	117,463	7,27
	✞15	118,734	7,47
	✞16	81,897	6,15
	✞17	84,495	6,45
	✞18	82,151	6,59
	✞19	88,403	7,28
	✞20	112,961	6,59
	✞21	111,761	6,09
	✞22	78,882	5,82
	✞23	76,625	6,33
	✞24	77,366	6,54
	✞25	97,270	7,13
	✞26	95,772	7,52
	✞27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	70,266	6,44
s	12,552	1,21
ν	17,86	18,71

KUAT TARIK

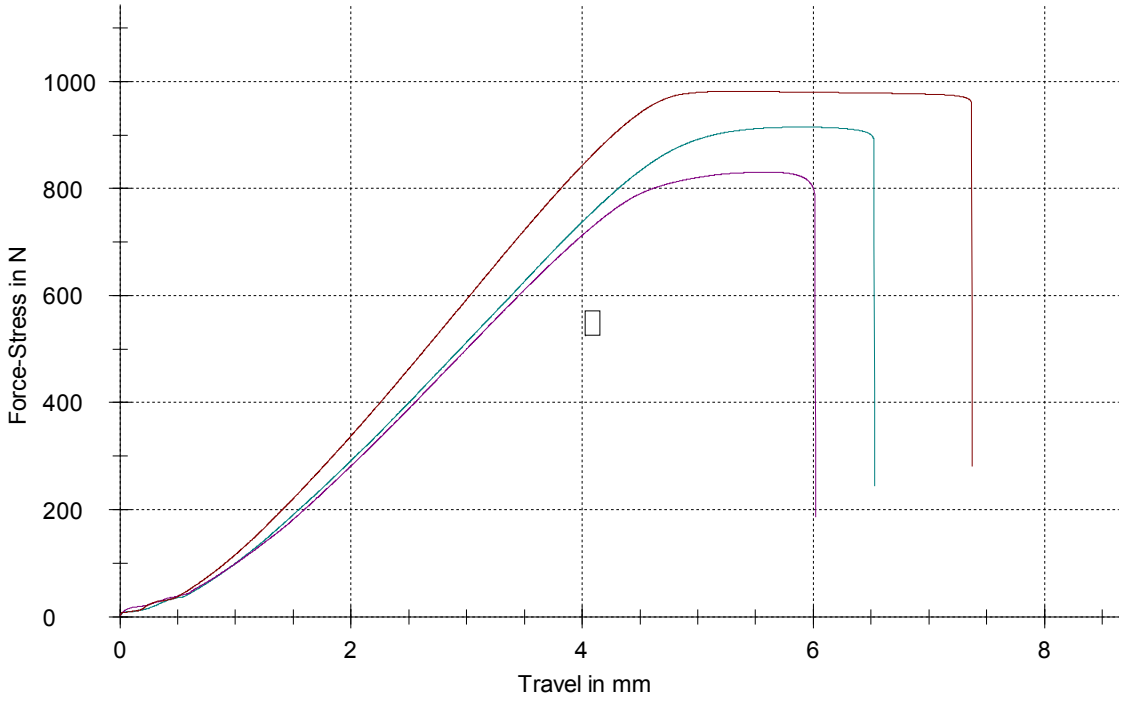
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	☥1	57,251	5,10
	☥2	82,296	6,78
	☥3	71,251	7,44
	4	93,299	5,89
	5	84,707	6,02
	6	100,113	7,37
	☥7	114,350	5,37
	☥8	113,778	7,34
	☥9	111,019	6,71
	☥10	104,068	5,83
	☥11	101,639	7,62
	☥12	92,519	8,12
	☥13	116,829	6,97
	☥14	117,463	7,27
	☥15	118,734	7,47
	☥16	81,897	6,15
	☥17	84,495	6,45
	☥18	82,151	6,59
	☥19	88,403	7,28
	☥20	112,961	6,59
	☥21	111,761	6,09
	☥22	78,882	5,82
	☥23	76,625	6,33
	☥24	77,366	6,54
	☥25	97,270	7,13
	☥26	95,772	7,52
	☥27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	92,706	6,43
s	7,721	0,82
ν	8,33	12,81

KUAT TARIK

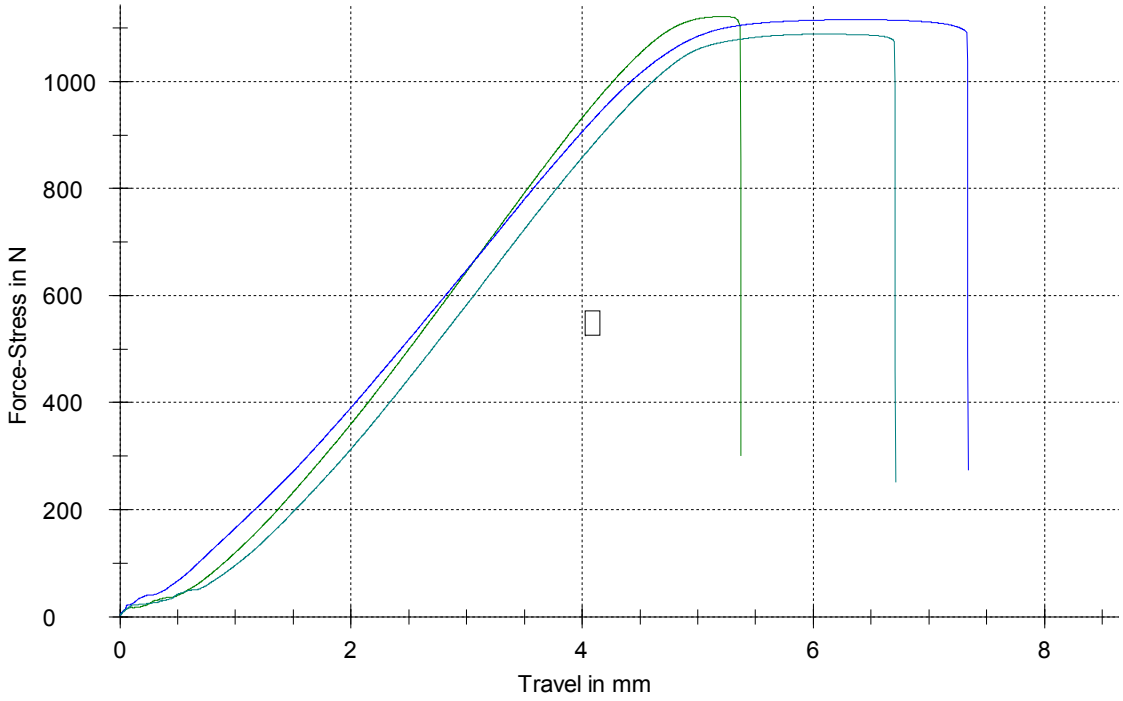
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	☥1	57,251	5,10
	☥2	82,296	6,78
	☥3	71,251	7,44
	☥4	93,299	5,89
	☥5	84,707	6,02
	☥6	100,113	7,37
	7	114,350	5,37
	8	113,778	7,34
	9	111,019	6,71
	☥10	104,068	5,83
	☥11	101,639	7,62
	☥12	92,519	8,12
	☥13	116,829	6,97
	☥14	117,463	7,27
	☥15	118,734	7,47
	☥16	81,897	6,15
	☥17	84,495	6,45
	☥18	82,151	6,59
	☥19	88,403	7,28
	☥20	112,961	6,59
	☥21	111,761	6,09
	☥22	78,882	5,82
	☥23	76,625	6,33
	☥24	77,366	6,54
	☥25	97,270	7,13
	☥26	95,772	7,52
	☥27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	113,049	6,47
s	1,781	1,00
ν	1,58	15,49

KUAT TARIK

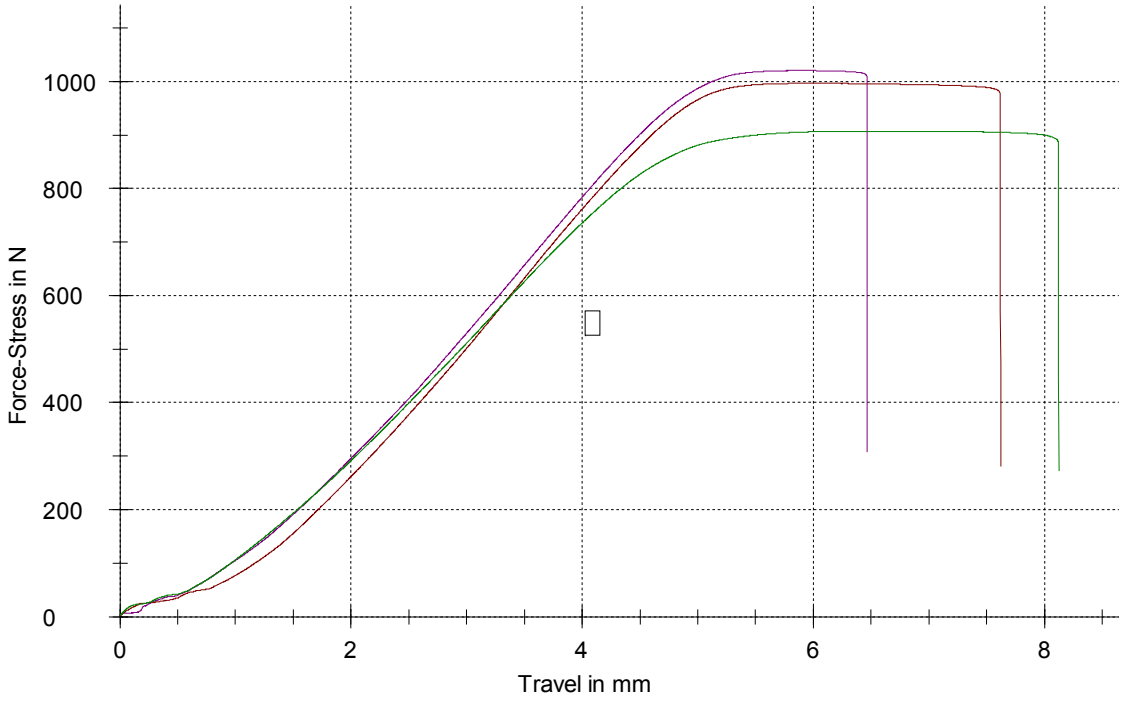
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	✞1	57,251	5,10
	✞2	82,296	6,78
	✞3	71,251	7,44
	✞4	93,299	5,89
	✞5	84,707	6,02
	✞6	100,113	7,37
	✞7	114,350	5,37
	✞8	113,778	7,34
	✞9	111,019	6,71
	10	104,068	5,83
	11	101,639	7,62
	12	92,519	8,12
	✞13	116,829	6,97
	✞14	117,463	7,27
	✞15	118,734	7,47
	✞16	81,897	6,15
	✞17	84,495	6,45
	✞18	82,151	6,59
	✞19	88,403	7,28
	✞20	112,961	6,59
	✞21	111,761	6,09
	✞22	78,882	5,82
	✞23	76,625	6,33
	✞24	77,366	6,54
	✞25	97,270	7,13
	✞26	95,772	7,52
	✞27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	99,409	7,19
s	6,089	1,21
ν	6,13	16,80

KUAT TARIK

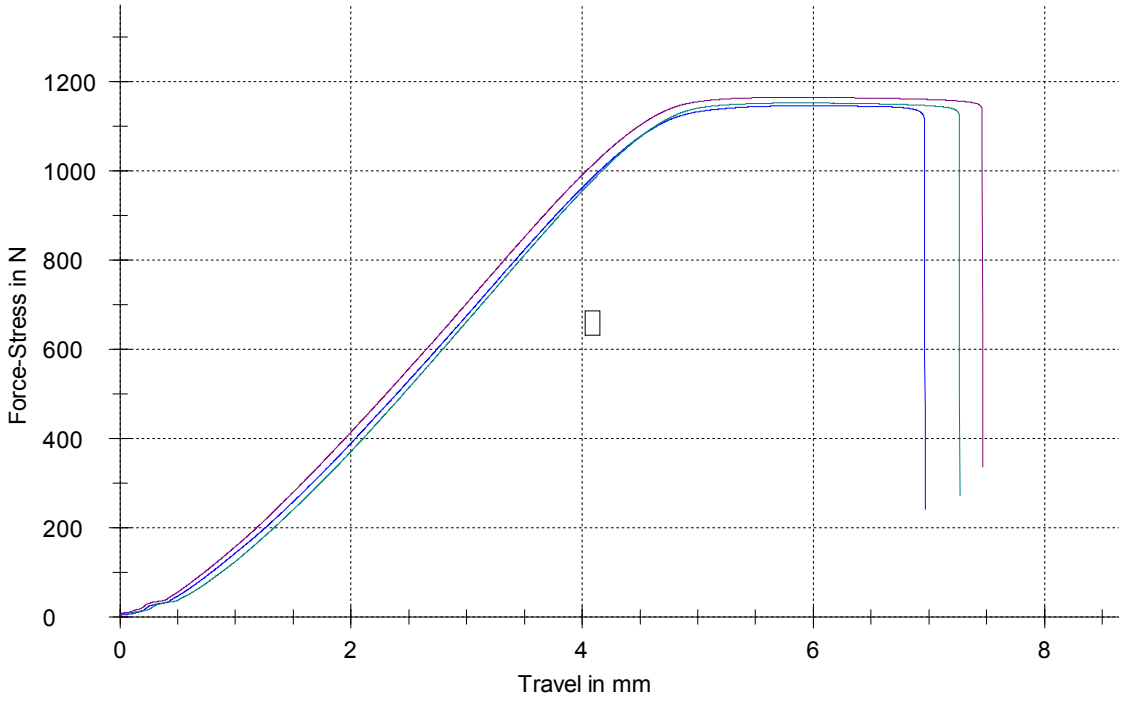
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	✞1	57,251	5,10
	✞2	82,296	6,78
	✞3	71,251	7,44
	✞4	93,299	5,89
	✞5	84,707	6,02
	✞6	100,113	7,37
	✞7	114,350	5,37
	✞8	113,778	7,34
	✞9	111,019	6,71
	✞10	104,068	5,83
	✞11	101,639	7,62
	✞12	92,519	8,12
	13	116,829	6,97
	14	117,463	7,27
	15	118,734	7,47
	✞16	81,897	6,15
	✞17	84,495	6,45
	✞18	82,151	6,59
	✞19	88,403	7,28
	✞20	112,961	6,59
	✞21	111,761	6,09
	✞22	78,882	5,82
	✞23	76,625	6,33
	✞24	77,366	6,54
	✞25	97,270	7,13
	✞26	95,772	7,52
	✞27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	117,675	7,23
s	0,970	0,25
ν	0,82	3,47

KUAT TARIK

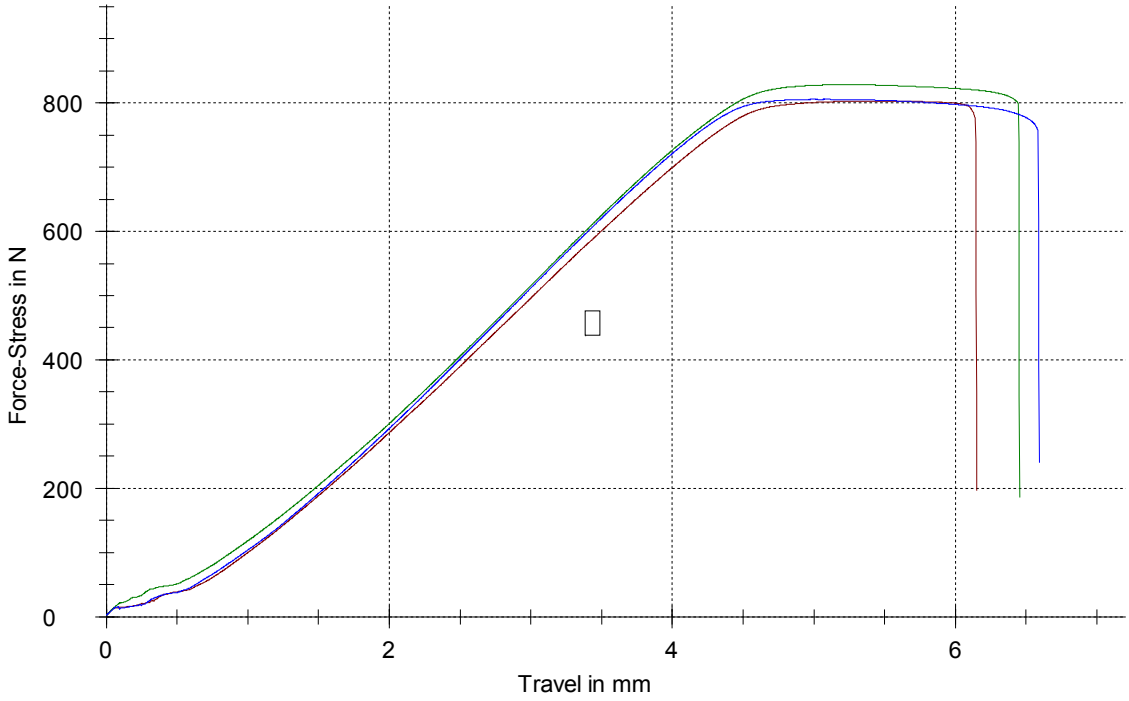
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	☥1	57,251	5,10
	☥2	82,296	6,78
	☥3	71,251	7,44
	☥4	93,299	5,89
	☥5	84,707	6,02
	☥6	100,113	7,37
	☥7	114,350	5,37
	☥8	113,778	7,34
	☥9	111,019	6,71
	☥10	104,068	5,83
	☥11	101,639	7,62
	☥12	92,519	8,12
	☥13	116,829	6,97
	☥14	117,463	7,27
	☥15	118,734	7,47
	16	81,897	6,15
	17	84,495	6,45
	18	82,151	6,59
	☥19	88,403	7,28
	☥20	112,961	6,59
	☥21	111,761	6,09
	☥22	78,882	5,82
	☥23	76,625	6,33
	☥24	77,366	6,54
	☥25	97,270	7,13
	☥26	95,772	7,52
	☥27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	82,848	6,40
s	1,432	0,23
ν	1,73	3,53

KUAT TARIK

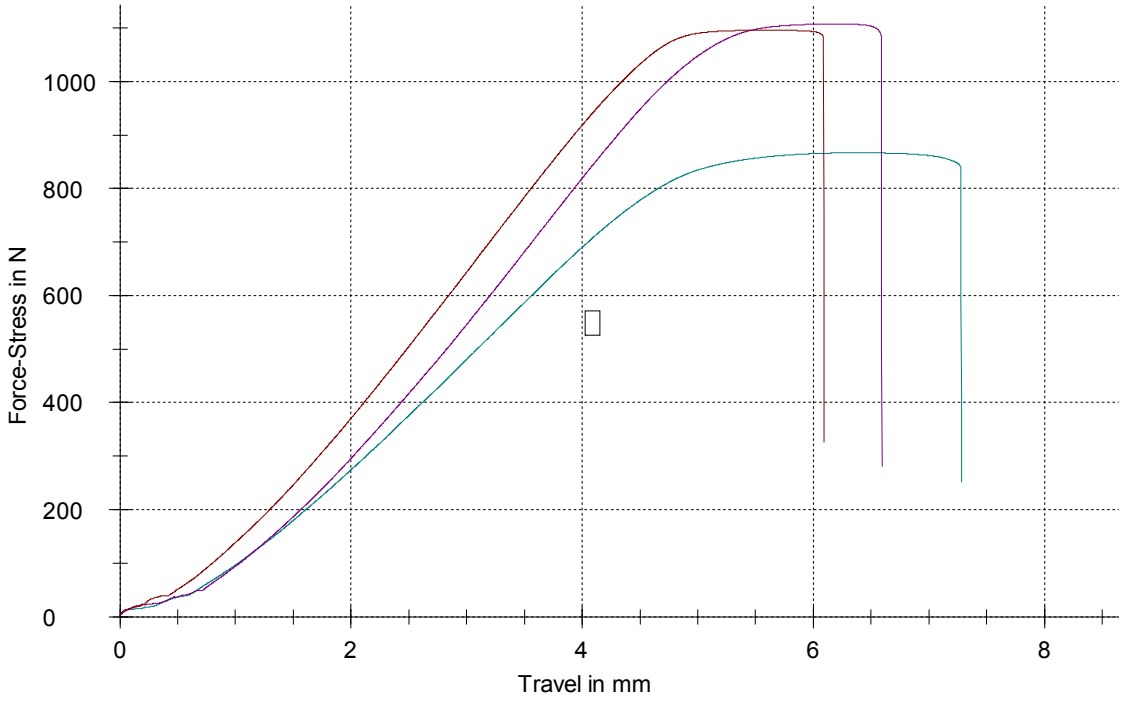
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	☥1	57,251	5,10
	☥2	82,296	6,78
	☥3	71,251	7,44
	☥4	93,299	5,89
	☥5	84,707	6,02
	☥6	100,113	7,37
	☥7	114,350	5,37
	☥8	113,778	7,34
	☥9	111,019	6,71
	☥10	104,068	5,83
	☥11	101,639	7,62
	☥12	92,519	8,12
	☥13	116,829	6,97
	☥14	117,463	7,27
	☥15	118,734	7,47
	☥16	81,897	6,15
	☥17	84,495	6,45
	☥18	82,151	6,59
	19	88,403	7,28
	20	112,961	6,59
	21	111,761	6,09
	☥22	78,882	5,82
	☥23	76,625	6,33
	☥24	77,366	6,54
	☥25	97,270	7,13
	☥26	95,772	7,52
	☥27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	104,375	6,66
s	13,845	0,60
ν	13,26	8,97

KUAT TARIK

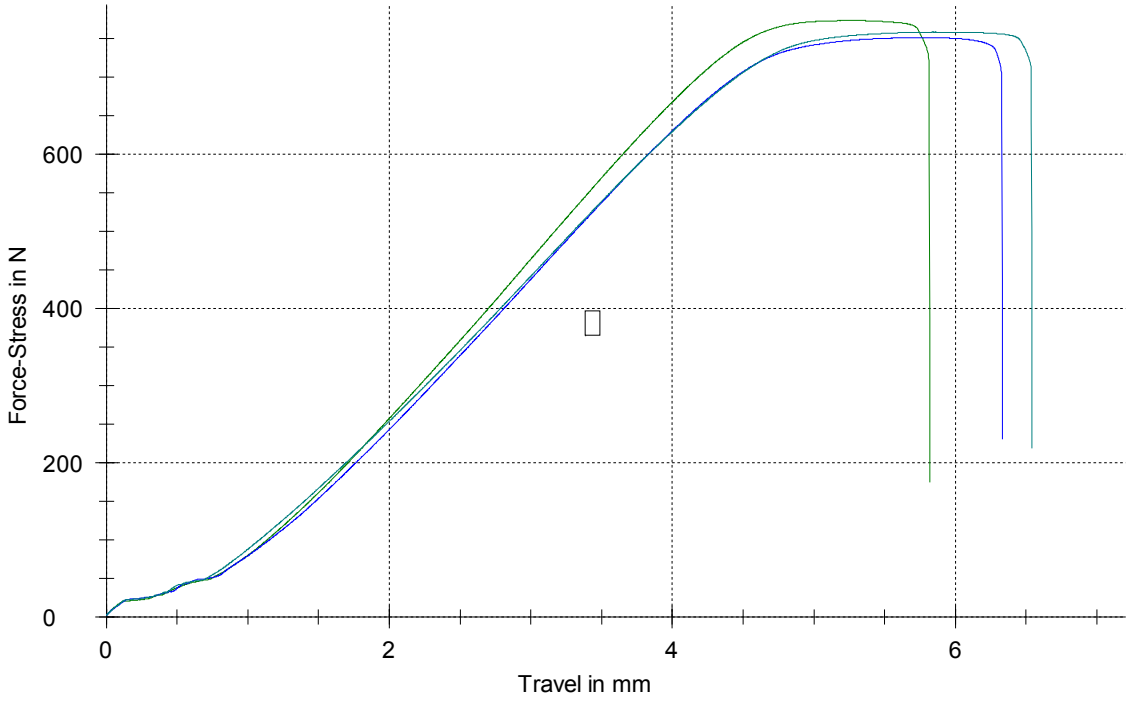
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	☥1	57,251	5,10
	☥2	82,296	6,78
	☥3	71,251	7,44
	☥4	93,299	5,89
	☥5	84,707	6,02
	☥6	100,113	7,37
	☥7	114,350	5,37
	☥8	113,778	7,34
	☥9	111,019	6,71
	☥10	104,068	5,83
	☥11	101,639	7,62
	☥12	92,519	8,12
	☥13	116,829	6,97
	☥14	117,463	7,27
	☥15	118,734	7,47
	☥16	81,897	6,15
	☥17	84,495	6,45
	☥18	82,151	6,59
	☥19	88,403	7,28
	☥20	112,961	6,59
	☥21	111,761	6,09
	22	78,882	5,82
	23	76,625	6,33
	24	77,366	6,54
	☥25	97,270	7,13
	☥26	95,772	7,52
	☥27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	77,625	6,23
s	1,150	0,37
ν	1,48	5,96

KUAT TARIK

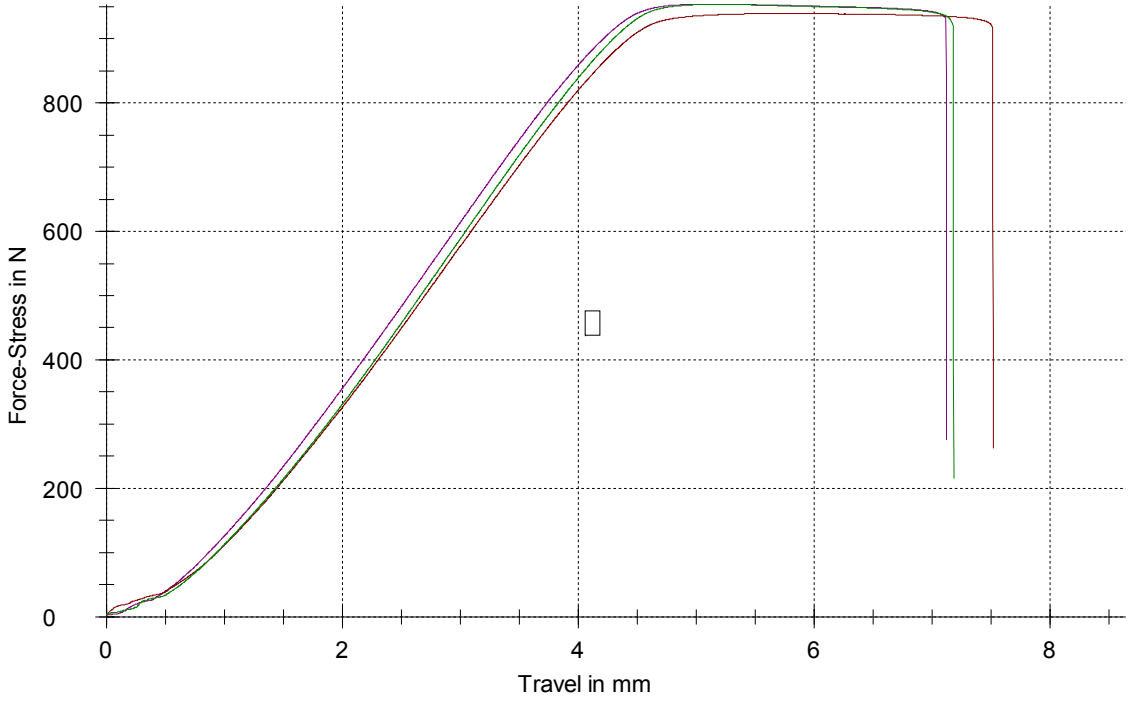
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 76/I/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: ABS 3D PRINTING	Load cell	:
Test standard	: ASTM D 638-I		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	☥1	57,251	5,10
	☥2	82,296	6,78
	☥3	71,251	7,44
	☥4	93,299	5,89
	☥5	84,707	6,02
	☥6	100,113	7,37
	☥7	114,350	5,37
	☥8	113,778	7,34
	☥9	111,019	6,71
	☥10	104,068	5,83
	☥11	101,639	7,62
	☥12	92,519	8,12
	☥13	116,829	6,97
	☥14	117,463	7,27
	☥15	118,734	7,47
	☥16	81,897	6,15
	☥17	84,495	6,45
	☥18	82,151	6,59
	☥19	88,403	7,28
	☥20	112,961	6,59
	☥21	111,761	6,09
	☥22	78,882	5,82
	☥23	76,625	6,33
	☥24	77,366	6,54
	25	97,270	7,13
	26	95,772	7,52
	27	97,233	6,47

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	96,758	7,04
s	0,854	0,53
ν	0,88	7,52

KUAT TARIK

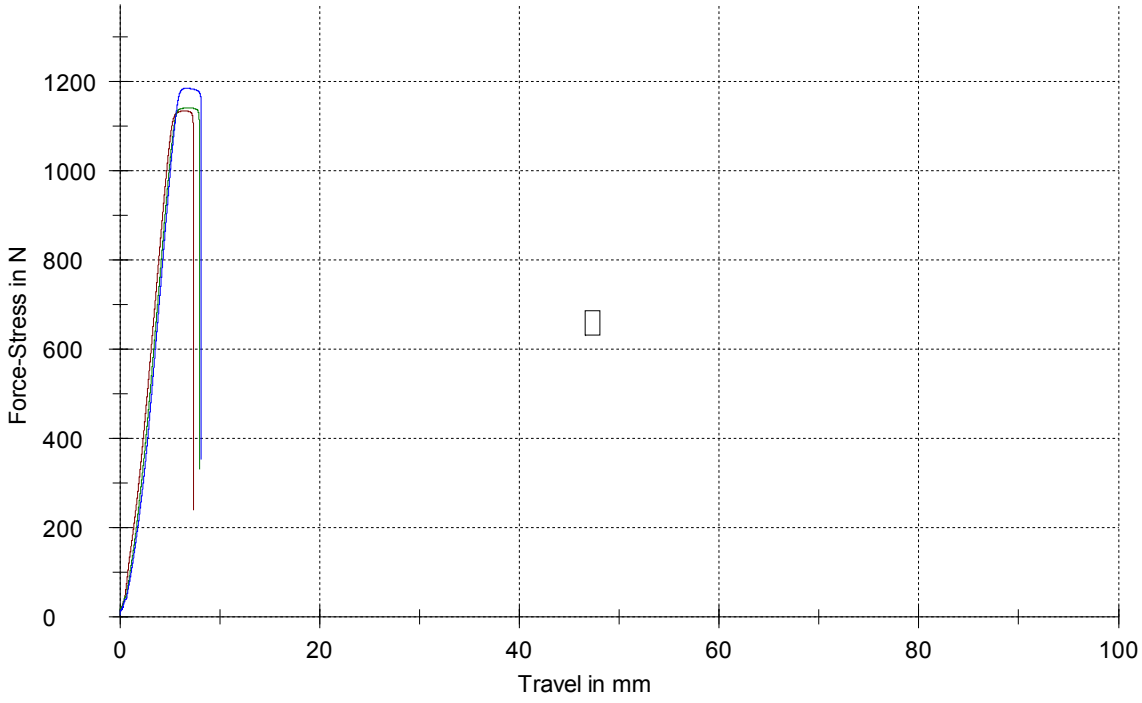
Parameter table:

Headline	: KUAT TARIK	Evaluat. method	: M (Automatic A, B or C)
Customer	: 431/LUPKKP_PLASTIK/III/18	Specimen holders	:
Tester	: L Triyono	Extensometer	:
Material	: PRODUK 3D PRINTING ABS	Load cell	:
Test standard	: ASTM D 638		

Results:

Legends	Nr	Fmax Lm kgf	Measurement travel end mm
	1	115,627	7,36
	2	116,376	7,96
	3	120,793	7,32

Series graph:



Statistics:

Series n = 3	Fmax Lm kgf	Measurement travel end mm
$\bar{x}$	117,599	7,54
s	2,792	0,36
ν	2,37	4,74

LAMPIRAN

Lampiran 10. Data analisis SNR NTB menggunakan *Software* Minitab 2017 pada respon Akurasi Dimensi

Length Overall			*Width Overall*		
SNR	STD	MEAN	SNR	STD	MEAN
64,38	0,10	165,50	47,88	0,08	18,92
60,70	0,15	165,57	47,41	0,08	18,87
55,91	0,26	165,20	50,26	0,06	18,81
64,01	0,10	165,18	39,40	0,20	18,87
58,00	0,21	165,37	43,73	0,12	18,94
62,35	0,13	165,02	41,67	0,16	18,93
56,50	0,25	164,87	46,67	0,09	18,92
69,13	0,06	165,27	49,57	0,06	18,93
68,19	0,06	165,07	35,85	0,30	18,80

Width of Narrow			*Thickness*		
SNR	STD	MEAN	SNR	STD	MEAN
43,30	0,09	13,08	35,06	0,07	4,01
67,07	0,01	13,04	36,93	0,06	4,10
50,02	0,04	12,85	43,23	0,03	4,25
38,90	0,15	13,16	33,11	0,09	4,05
41,66	0,11	13,16	40,61	0,04	4,14
38,02	0,16	13,05	44,31	0,03	4,11
45,25	0,07	12,90	43,68	0,03	4,08
44,67	0,08	13,05	36,40	0,06	4,12
43,77	0,08	12,86	39,38	0,05	4,22

Lampiran 11. Data analisis SNR LTB menggunakan *Software* Minitab 2017 pada respon Kekuatan Tarik

Tensile Strength		
SNR	STD	MEAN
14,87	2,37	13,14
20,33	1,64	17,03
32,44	0,49	20,32
26,03	0,91	18,28
42,13	0,17	21,17
34,81	0,28	15,15
16,93	2,77	19,45
29,75	0,46	14,18
36,52	0,26	17,49