

Case i: Weibull Distribution

ARL Table for shape parameter increase from the in-control state in Wei(1.1,1.6)

α	μ_X	$n = 5$				$n = 10$				$n = 20$			
		\bar{X} chart		\tilde{X} chart		\bar{X} chart		\tilde{X} chart		\bar{X} chart		\tilde{X} chart	
		ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+
1.00	1.60	96.90	198.70	97.53	198.79	99.19	198.25	100.16	203.43	98.29	194.86	100.04	201.35
1.05	1.57	145.13	351.42	139.31	225.92	147.98	380.98	141.85	192.64	144.81	400.61	117.98	140.40
1.10	1.54	214.85	644.24	185.26	253.95	214.34	741.36	157.07	176.54	201.93	849.33	94.44	97.88
1.15	1.52	310.64	1210.17	238.39	287.26	307.02	1504.46	157.72	165.09	269.26	1894.68	70.10	69.17

ARL Table for scale parameter increase from the in-control state in Wei(1.1,1.6)

β	μ_X	$n = 5$				$n = 10$				$n = 20$			
		\bar{X} chart		\tilde{X} chart		\bar{X} chart		\tilde{X} chart		\bar{X} chart		\tilde{X} chart	
		ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+	ARL	ARL^+
1.6	1.6	96.90	198.70	97.53	198.79	99.19	198.25	100.16	203.43	98.29	194.86	100.04	201.35
1.8	1.8	59.96	73.62	71.08	87.53	50.40	57.00	58.21	65.04	36.11	38.30	38.07	39.72
2.0	2.0	32.31	34.94	43.02	45.77	21.28	22.12	25.56	25.91	12.03	11.89	11.85	11.66
2.2	2.2	18.40	18.83	25.70	26.83	10.57	10.57	12.33	12.43	4.97	5.02	4.61	4.63
2.4	2.4	11.51	11.47	16.75	16.87	5.82	5.98	6.61	6.58	2.46	2.46	2.13	2.14
2.6	2.6	7.55	7.66	11.23	11.22	3.65	3.57	3.91	3.88	1.35	1.37	1.09	1.10