

**ARL Table for scale parameter decrease from the in-control state**

Table 1: ARL of  $\sigma$  decrease from in-control state in  $LN(0, 1)$

$\sigma$	$\mu_X$	$n = 5$				$n = 10$				$n = 20$			
		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart	
		$ARL^-$	$ARL$	$ARL^-$	$ARL$	$ARL^-$	$ARL$	$ARL^-$	$ARL$	$ARL^-$	$ARL$	$ARL^-$	$ARL$
1.0	1.65	202.20	98.89	198.78	101.11	200.65	99.70	198.87	100.36	193.88	98.83	199.33	99.61
0.9	1.50	345.51	228.51	678.99	218.24	261.56	210.55	981.46	200.33	184.48	164.80	1564.11	159.70
0.8	1.38	711.97	610.49	2837.89	489.00	399.70	380.76	7898.24	343.30	186.28	183.97	27042.76	171.74