

Formulário:

Gráfico de Controle	Limite Inferior de Controle (LIC)	Linha Central (LC)	Limite Superior de Controle (LSC)
$\bar{X} - R$	$\bar{x} - A_2 \bar{r}$	$\bar{x} = \frac{1}{m} \sum_{i=1}^m \bar{x}_i$	$\bar{x} + A_2 \bar{r}$
	$D_3 \bar{r}$	$\bar{r} = \frac{1}{m} \sum_{i=1}^m r_i$	$D_4 \bar{r}$
$\bar{X} - S$	$\bar{x} - 3 \frac{\bar{s}}{c_4 \sqrt{n}}$	$\bar{x} = \frac{1}{m} \sum_{i=1}^m \bar{x}_i$	$\bar{x} + 3 \frac{\bar{s}}{c_4 \sqrt{n}}$
	$\bar{s} - 3 \frac{\bar{s}}{c_4} \sqrt{1 - c_4^2}$	$\bar{s} = \frac{1}{m} \sum_{i=1}^m s_i$	$\bar{s} + 3 \frac{\bar{s}}{c_4} \sqrt{1 - c_4^2}$
$\bar{X} - am$	$\bar{x} - 3 \frac{\overline{am}}{d_2} = \bar{x} - 3 \frac{\overline{am}}{1,128}$	$\bar{x} = \frac{1}{m} \sum_{i=1}^m x_i$	$\bar{x} + 3 \frac{\overline{am}}{1,128}$
	$D_3 \overline{am} = 0$	$\overline{am} = \frac{1}{m-1} \sum_{i=2}^m x_i - x_{i-1} $	$D_4 \overline{am} = 3,267 \overline{am}$
P	$\bar{p} - 3 \sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$	$\bar{p} = \frac{1}{m} \sum_{i=1}^m p_i$	$\bar{p} + 3 \sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$
U	$\bar{u} - 3 \sqrt{\frac{\bar{u}}{n}}$	$\bar{u} = \frac{1}{m} \sum_{i=1}^m u_i$	$\bar{u} + 3 \sqrt{\frac{\bar{u}}{n}}$

n^*	Fator para os Limites de Controle						
	Gráfico \bar{X}			Gráfico R		Gráfico S	
	A_1	A_2	d_2	D_3	D_4	c_4	n
2	3,760	1,880	1,128	0	3,267	0,7979	2
3	2,394	1,023	1,693	0	2,575	0,8862	3
4	1,880	0,729	2,059	0	2,282	0,9213	4
5	1,596	0,577	2,326	0	2,115	0,9400	5
6	1,410	0,483	2,534	0	2,004	0,9515	6
7	1,277	0,419	2,704	0,076	1,924	0,9594	7
8	1,175	0,373	2,847	0,136	1,864	0,9650	8
9	1,094	0,337	2,970	0,184	1,816	0,9693	9
10	1,028	0,308	3,078	0,223	1,777	0,9727	10
11	0,973	0,285	3,173	0,256	1,744	0,9754	11
12	0,925	0,266	3,258	0,284	1,716	0,9776	12
13	0,884	0,249	3,336	0,308	1,692	0,9794	13
14	0,848	0,235	3,407	0,329	1,671	0,9810	14
15	0,816	0,223	3,472	0,348	1,652	0,9823	15
16	0,788	0,212	3,532	0,364	1,636	0,9835	16
17	0,762	0,203	3,588	0,379	1,621	0,9845	17
18	0,738	0,194	3,640	0,392	1,608	0,9854	18
19	0,717	0,187	3,689	0,404	1,596	0,9862	19
20	0,697	0,180	3,735	0,414	1,586	0,9869	20
21	0,679	0,173	3,778	0,425	1,575	0,9876	21
22	0,662	0,167	3,819	0,434	1,566	0,9882	22
23	0,647	0,162	3,858	0,443	1,557	0,9887	23
24	0,632	0,157	3,895	0,452	1,548	0,9892	24
25	0,619	0,153	3,931	0,459	1,541	0,9896	25

* $n > 25$: $A_1 = 3/\sqrt{n}$, sendo n = número de observações na amostra.

- Capacidade de Processo:

$$RCP = \frac{LSE - LIE}{6\sigma}, \quad RCP_k = \min \left[\frac{LSE - \mu}{3\sigma}, \frac{\mu - LIE}{3\sigma} \right]$$