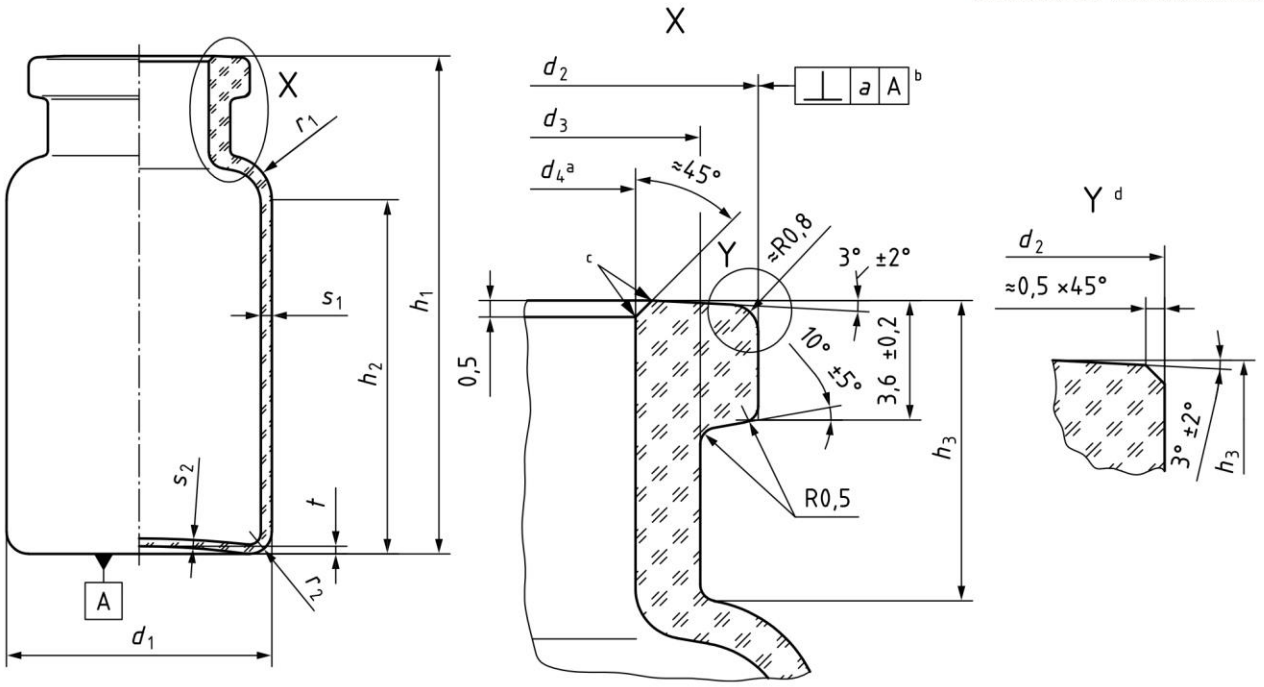
Dimensions in millimetres



a The opening of the vial should have a constant diameter, over the entire distance, h_3, i.e. it should exhibit a cylindrical shape. A slightly conical shape can be accepted if the following requirements are fulfilled:

— the truncated cone has the height h_3;

— the larger diameter is located at the flange or as agreed upon;

— the larger diameter does not exceed the smaller one by more than 0,3 mm.

b The perpendicularity tolerance a (as defined in ISO 1101) is a limit for the deviation of the plumb-line through the centre of the bottom part and the axis of the vial at the upper edge of the flange; it is measured at the brim.

c Edges slightly rounded.

d ≈ R0,8 (a chamfer shaped with ≈ 45° is alternatively also feasable).

Figure 1 — Typical example of injection vial made of glass tubing containing a neck finish without blow back — Model A

Table 1 — Dimensions, brimful capacity and mass

Size designation of injection vial	Brimful capacity ml	tol	a mm	d_1 mm	tol.	d_2 mm +0,2 −0,3	d_3 mm max.	d_4 mm ±0,2	h_1 mm	tol.	h_2 mm min.	h_3 mm	tol.	r_1 mm ≈	r_2 mm ≈	s_1 mm	tol.	s_2 mm min.	t mm max.	Mass [a,b] ≈
2R	4	±0,5	1	16	±0,15	13	10,5	7	35	±0,5	22	8	±0,5	2,5	1,5	1	±0,04	0,6	0,7	4,4
3R	5								40		27									5,5
4R	6								45		32									5,7
6R	10		1,2	22	±0,2	20	16,5	12,6	40		26	8,5		3,5	2			0,7		7,9
8R	11,5								45		31									8,7
10R	13,5	±1		24							30	9		4,0						9,5
15R	19								60		45									12,0
20R	26	±1,5	1,5	30	±0,25		17,5		55	±0,7	35	10	±0,75	5,5	2,5	1,2	±0,05	0,7	1	16,2
25R	32,5								65		45									18,9
30R	37,5								75		55									21,9
50R	62	±4	2,5	40	±0,4		17,5[c]		73	±0,75	49			6,0	4,0	1,5	±0,07	0,9	1,5	34,5
100R	123	±7	3,5	47	±0,5				100		75			6,5		1,7				60,0

[a] Mean values that can deviate about 10 %.

[b] The mass specifications apply to injection vials made of colourless borosilicate glass having a linear expansion coefficient of $5{,}1 \times 10^{-6}\ K^{-1}$ and a density of $2{,}34\ g/cm^3$. The mass of vials made of other glass types (e.g. amber glass or borosilicate glass 3.3) needs to be calculated using the density of the particular glass.

[c] With blow back Type B: 17,7 mm. The slightly larger diameter is necessary due to the different hot-forming process with more glass mass having to be formed.