

Specifications of different grades of stainless steel used in HPLC columns

Cogent™ HPLC stainless steel column hardware is T1 grade, AISI 316 LC type. HPLC system tubing is AISI 316 (highlighted in green in the chart below, T2 grade. We also offer fully coated stainless steel column hardware and PEEK column hardware to eliminate sample interaction with the surface sites of stainless steel.

Elemental assays of the various stainless steel grades are given in the following table:

Steel			Analysis %				
SS	AISI	W.-nr	C	Cr	Ni	Mo	Övr
Martensitiska steel							
2303	420	1.4021	0,16-0,25	12,0-14,0			
2383	(430F)	1.4104	0,10-0,17	15,5-17,5		0,2-0,6	S
2387		1.4418	<0,05	15,0-17,0	4,0-6,0	0,8-1,5	
Ferrit-austenitiska steel							
2324	329	1.4460	<0,10	24,0-27,0	4,5-7,0	1,3-1,8	
2377	S31803	1.4462	<0,030	21,0-23,0	4,5-6,5	2,5-3,5	N
Austenitiska steel							
2333	304	1.4301	<0,05	17,0-19,0	8,0-11,0		
2337	321	1.4541	<0,08	17,0-19,0	9,0-12,0		Ti
2338	347	1.4550	<0,08	17,0-19,0	9,0-12,0		Nb
2346	303	1.4305	<0,12	17,0-19,0	8,0-10,0	<0,60	S
2352	304L	1.4306	<0,030	17,0-19,0	9,0-12,0		
2343	316	1.4436	<0,05	16,0-18,5	10,5-14,0	2,5-3,0	
2347	316	1.4401	<0,05	16,5-18,5	10,5-14,0	2,0-2,5	
2348	316L	1.4404	<0,030	16,5-18,5	11,0-14,0	2,0-2,5	
2350	316Ti	1.4571	<0,08	16,5-18,5	10,5-14,0	2,0-2,5	Ti
2353	316L	1.4435	<0,030	16,5-18,5	11,5-14,5	2,5-3,0	
2361	310S	1.4845	<0,08	24,0-26,0	19,0-22,0		
2368	S31815	1.4893	0,05-0,10	20,0-22,0	10,0-12,0		Si,N,Ce
2378	S31254	1.4547	<0,020	19,5-20,5	17,5-18,5	6,0-6,5	Cu,N
2562	N08904	1.4539	<0,025	19,0-21,0	24,0-26,0	4,0-5,0	Cu

Ti Grade 2

Carbon	0.1 max
Hydrogen	0.015 max
Iron	0.3 max
Nitrogen	0.03 max
Oxygen	0.25 max
Titanium	Balance