

Article

Investigation of CoCr Dental Alloy: Example from a Casting Workflow Standpoint

Dragana Majerić ¹, Vojkan Lazić ¹, Peter Majerić ^{2,3} Aleksa Marković ¹ and Rebeka Rudolf ^{2,3,*}

¹ School of Dental Medicine, University of Belgrade, dr. Subotića 8, 11000 Belgrade, Serbia; dragana.smiljanic.989@gmail.com (M.G.); Vojkan.Lazic@stomf.bg.ac.rs (V.L.); aleksa.markovic@stomf.bg.ac.rs (A.M.)

² Faculty of Mechanical Engineering, University of Maribor, Smetanova 17, 2000 Maribor, Slovenia; peter.majeric@um.si or peter.majeric@zlatarnacelje.si

³ Zlatarna Celje d.o.o., Kersnikova ulica 19, 3000 Celje, Slovenia

* Correspondence: rebeka.rudolf@um.si or rebeka.rudolf@zlatarnacelje.si; Tel.: +386-2220-7865

Structure data for detected phases, output generated by CrystalDiffract 6 for macOS

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Cr-alpha

h	k	l	d(A)	2 theta	Lp	F(Re)	F(Im)	Intensity
1	1	0	2.0392	44.3847	2.86	33.45	0.00	-2.43949×10^{02}
2	0	0	1.4419	64.5756	1.23	27.19	-0.00	3.46093×10^{01}
2	1	1	1.1773	81.7218	0.79	23.32	-0.00	6.53830×10^{01}
2	2	0	1.0196	98.1266	0.68	20.71	-0.00	2.22948×10^{01}

Cr₂O₃

h	k	l	d(A)	2theta	Lp	F(Re)	F(Im)	Intensity
1	1	0	3.6307	24.4967	10.39	-31.22	0.00	2.38527×10^{01}
2	1	1	2.6646	33.6041	5.29	-54.72	0.00	3.73345×10^{01}
1	-1	0	2.4799	36.1904	4.50	56.55	0.00	3.39098×10^{01}
2	1	0	2.1753	41.4726	3.33	25.94	0.00	1.05505×10^{01}
2	2	0	1.8153	50.2126	2.16	-53.50	0.00	1.45705×10^{01}
3	2	1	1.6724	54.8480	1.77	62.98	-0.00	3.30325×10^{01}
3	1	0	1.4648	63.4487	1.28	-44.42	0.00	1.18567×10^{01}
-2	1	1	1.4318	65.0911	1.21	73.41	-0.00	1.53163×10^{01}
4	3	3	1.2956	72.9531	0.96	-51.75	0.00	6.02701×10^{00}

Co

h	k	l	d(A)	2theta	Lp	F(Re)	F(Im)	Intensity
1	1	1	2.0548	44.0308	2.91	78.39	−0.00	2.57463×10^{02}
2	0	0	1.7795	51.2967	2.06	73.36	−0.00	1.19589×10^{02}
2	2	0	1.2583	75.4884	0.90	59.04	−0.00	6.74723×10^{01}
3	1	1	1.0731	91.7454	0.70	51.94	−0.00	8.12530×10^{01}

SiO₂

h	k	l	d(A)	2theta	Lp	F(Re)	F(Im)	Intensity
1	−1	0	4.2522	20.8726	14.51	−14.70	0.00	5.41335×10^{00}
−1	1	1	3.3408	26.6602	8.69	−13.18	22.82	1.04201×10^{01}
−2	1	2	1.8164	50.1815	2.16	26.28	3.68	2.63108×10^{00}
−2	2	3	1.3738	68.2057	1.09	35.06	−0.00	2.31840×10^{00}

Co_{0.8}Cr_{0.2}

h	k	l	d(A)	2theta	Lp	F(Re)	F(Im)	Intensity
1	−1	0	2.1824	41.3345	3.35	−19.52	0.01	5.61934×10^{01}
0	0	2	2.0310	44.5741	2.83	−37.88	0.00	5.95302×10^{01}
1	−1	1	1.9225	47.2381	2.48	32.00	−0.01	2.23480×10^{02}
1	−1	2	1.4868	62.4055	1.32	16.03	−0.01	2.98823×10^{01}
2	−1	0	1.2600	75.3685	0.90	28.56	−0.02	3.22420×10^{01}
1	−1	3	1.1506	84.0511	0.76	−23.03	0.01	3.53948×10^{01}