

TABLE E-1 Surface Chemical Composition of Ti6Al4V Disks and Pedicle Screws as Determined with X-Ray Photon Spectroscopy and Energy-Dispersive Analysis of X-Rays

	Chemical Composition (%)					
	Ti6Al4V Disks				Pedicle Screws	
	0.2- μ m Ra	2.0- μ m Ra	3.0- μ m Ra	3.3- μ m Ra	Smooth	Grit-Blasted
X-ray photon spectroscopy						
Ti	8.1	10.3	12.5	12.8	3.4	13.6
O	41.7	38.3	41.8	47.2	31.6	46.1
C	44.5	51.2	45.6	38.4	60.4	34.3
Al	1.6	0.0	0.0	1.2	0.0	0.0
V	0.1	0.0	0.1	0.0	0.0	0.0
Zr	0.0	0.0	0.0	0.0	0.0	0.0
Si	4.1	0.2	0.0	0.0	3.8	0.8
Ca	0.0	0.0	0.0	0.0	0.7	1.3
P	0.0	0.0	0.0	0.0	0.3	0.8
Energy-dispersive analysis of x-rays						
Ti	87.8	87.5	83.9	85.7	77.6	86.1
O	1.4	1.7	3.2	2.2	1.8	0.7
C	2.2	1.4	3.1	1.6	10.5	4.3
Al	7.8	7.6	7.2	7.6	6.3	5.7
V	0.2	0.9	1.3	1.4	2.7	3.1
Zr	0.2	0.6	0.8	1.1	0.0	0.0
Si	0.4	0.4	0.5	0.4	1.1	0.2
Ca	0.0	0.0	0.0	0.0	0.0	0.0
P	0.0	0.0	0.0	0.0	0.0	0.0