

# MPG No. 29.1.109 $m\bar{3}$ [ Type I, cubic ]

Table 1: Wyckoff site: **1o**, site symmetry: **m-3**

No.	position	mapping
1	[0, 0, 0]	[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24]

Table 2: Wyckoff site: **6a**, site symmetry: **2mm**.

No.	position	mapping
1	[ $x$ , 0, 0]	[1, 2, 15, 16]
2	[ $-x$ , 0, 0]	[3, 4, 13, 14]
3	[0, $x$ , 0]	[9, 11, 22, 24]
4	[0, $-x$ , 0]	[10, 12, 21, 23]
5	[0, 0, $x$ ]	[5, 8, 18, 19]
6	[0, 0, $-x$ ]	[6, 7, 17, 20]

Table 3: Wyckoff site: **8b**, site symmetry: **.3.**

No.	position	mapping
1	[ $x$ , $x$ , $x$ ]	[1, 5, 9]
2	[ $-x$ , $-x$ , $x$ ]	[4, 8, 12]
3	[ $-x$ , $x$ , $-x$ ]	[3, 7, 11]
4	[ $x$ , $-x$ , $-x$ ]	[2, 6, 10]
5	[ $-x$ , $-x$ , $-x$ ]	[13, 17, 21]
6	[ $x$ , $x$ , $-x$ ]	[16, 20, 24]
7	[ $x$ , $-x$ , $x$ ]	[15, 19, 23]
8	[ $-x$ , $x$ , $x$ ]	[14, 18, 22]

Table 4: Wyckoff site: **12c**, site symmetry: **m . .**

No.	position	mapping
1	[0, $y$ , $z$ ]	[1, 14]
2	[0, $-y$ , $z$ ]	[4, 15]
3	[0, $y$ , $-z$ ]	[3, 16]
4	[0, $-y$ , $-z$ ]	[2, 13]
5	[ $z$ , 0, $y$ ]	[9, 23]
6	[ $z$ , 0, $-y$ ]	[10, 24]
7	[ $-z$ , 0, $y$ ]	[12, 22]
8	[ $-z$ , 0, $-y$ ]	[11, 21]
9	[ $y$ , $z$ , 0]	[5, 20]
10	[ $-y$ , $z$ , 0]	[7, 18]

*continued ...*

Table 4

No.	position	mapping
11	$[y, -z, 0]$	[6, 19]
12	$[-y, -z, 0]$	[8, 17]

Table 5: Wyckoff site: 24d, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[-x, -y, z]$	[4]
3	$[-x, y, -z]$	[3]
4	$[x, -y, -z]$	[2]
5	$[z, x, y]$	[9]
6	$[z, -x, -y]$	[10]
7	$[-z, -x, y]$	[12]
8	$[-z, x, -y]$	[11]
9	$[y, z, x]$	[5]
10	$[-y, z, -x]$	[7]
11	$[y, -z, -x]$	[6]
12	$[-y, -z, x]$	[8]
13	$[-x, -y, -z]$	[13]
14	$[x, y, -z]$	[16]
15	$[x, -y, z]$	[15]
16	$[-x, y, z]$	[14]
17	$[-z, -x, -y]$	[21]
18	$[-z, x, y]$	[22]
19	$[z, x, -y]$	[24]
20	$[z, -x, y]$	[23]
21	$[-y, -z, -x]$	[17]
22	$[y, -z, x]$	[19]
23	$[-y, z, x]$	[18]
24	$[y, z, -x]$	[20]