

1.6. METHODS OF SPACE-GROUP DETERMINATION

Table 1.6.4.20

 Reflection conditions and possible space groups with Bravais lattice hP and Laue class $6/mmm$; hki are permutable; Patterson symmetry $P6/mmm$

Reflection conditions			Space group		Space group		Space group		
$hh\bar{2}hl$	$h\bar{h}0l$	$000l$	group	No.	group	No.	group	No.	
l	l	l	P622	177	$P6mm$	183	$P\bar{6}m2$	187	
			$P62m$	189	$P6/mmm$	191			
			P6₃22	182					
			$l = 3n$	P6₂22	180	P6₄22			181
			$l = 6n$	P6₁22	178	P6₅22			179
			l	$P6_3mc$	186	$P\bar{6}2c$			190
l	l	l	$P6_3cm$	185	$P\bar{6}c2$	188	$P6_3/mcm$	193	
l	l	l	$P6cc$	184	$P6/mcc$	192			

Table 1.6.4.21

 Reflection conditions and possible space groups with Bravais lattice hR and Laue class $\bar{3}$ (hexagonal axes); hki are permutable; Patterson symmetry $R\bar{3}$; Ov = obverse setting; Rv = reverse setting

Reflection conditions						Space group		Space group		
$hkil$	$hki0$	$hh\bar{2}hl$	$h\bar{h}0l$	$000l$	$h\bar{h}00$	group	No.	group	No.	
$-h + k + l = 3n$	$-h + k = 3n$	$l = 3n$	$h + l = 3n$	$l = 3n$	$h = 3n$	R3	146	$R\bar{3}$	148	Ov
$h - k + l = 3n$	$h - k = 3n$	$l = 3n$	$-h + l = 3n$	$l = 3n$	$h = 3n$	R3	146	$R\bar{3}$	148	Rv

Table 1.6.4.22

 Reflection conditions and possible space groups with Bravais lattice hR and Laue class $\bar{3}m$ (hexagonal axes); hki are permutable; Patterson symmetry $R\bar{3}m$; Ov = obverse setting; Rv = reverse setting

Reflection conditions						Space group		Space group		Space group		
$hkil$	$hki0$	$hh\bar{2}hl$	$h\bar{h}0l$	$000l$	$h\bar{h}00$	group	No.	group	No.	group	No.	
$-h + k + l = 3n$	$-h + k = 3n$	$l = 3n$	$h + l = 3n$	$l = 3n$	$h = 3n$	R32	155	$R3m$	160	$R\bar{3}m$	166	Ov
$-h + k + l = 3n$	$-h + k = 3n$	$l = 3n$	$h + l = 3n, l = 2m$	$l = 6n$	$h = 3n$	$R3c$	161	$R\bar{3}c$	167			Ov
$h - k + l = 3n$	$h - k = 3n$	$l = 3n$	$-h + l = 3n$	$l = 3n$	$h = 3n$	R32	155	$R3m$	160	$R\bar{3}m$	166	Rv
$h - k + l = 3n$	$h - k = 3n$	$l = 3n$	$-h + l = 3n, l = 2m$	$l = 6n$	$h = 3n$	$R3c$	161	$R\bar{3}c$	167			Rv

Table 1.6.4.23

 Reflection conditions and possible space groups with Bravais lattice hR and Laue class $\bar{3}$ (rhombohedral axes); hkl are permutable; Patterson symmetry $R\bar{3}$

Reflection conditions		Space group		Space group	
hhl	hhh	group	No.	group	No.
		R3	146	$R\bar{3}$	148

Table 1.6.4.24

 Reflection conditions and possible space groups with Bravais lattice hR and Laue class $\bar{3}m$ (rhombohedral axes); hkl are permutable; Patterson symmetry $R\bar{3}m$

Reflection conditions		Space group		Space group		Space group	
hhl	hhh	group	No.	group	No.	group	No.
		R32	155	$R3m$	160	$R\bar{3}m$	166
l	h	$R3c$	161	$R\bar{3}c$	167		