

$\rho 222$

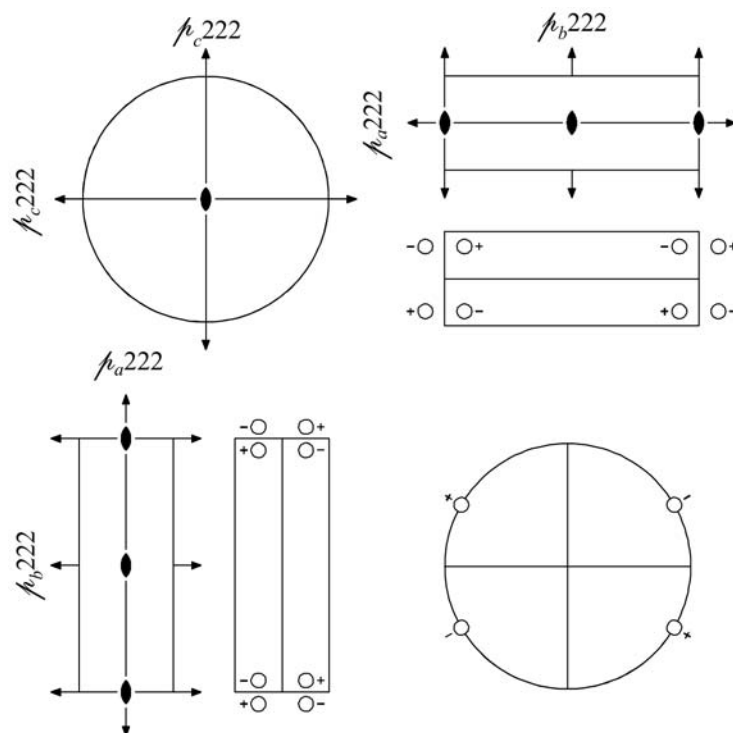
222

Orthorhombic

No. 13

$\rho 222$

Patterson symmetry ρmmm



Origin at 222

Asymmetric unit $0 \leq x; 0 \leq y; 0 \leq z \leq 1$

Symmetry operations

- (1) 1 (2) 2 $0,0,z$ (3) 2 $0,y,0$ (4) 2 $x,0,0$
 (1|0,0,0) (2_z|0,0,0) (2_y|0,0,0) (2_x|0,0,0)

Generators selected (1); $t(0,0,1)$; (2); (3)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates				Reflection conditions
4 <i>h</i> 1	(1) x, y, z	(2) \bar{x}, \bar{y}, z	(3) \bar{x}, y, \bar{z}	(4) x, \bar{y}, \bar{z}	General: no conditions Special: no extra conditions
2 <i>g</i> ..2	0, 0, z	0, 0, \bar{z}			
2 <i>f</i> .2.	0, $y, \frac{1}{2}$	0, $\bar{y}, \frac{1}{2}$			
2 <i>e</i> .2.	0, $y, 0$	0, $\bar{y}, 0$			
2 <i>d</i> 2..	$x, 0, \frac{1}{2}$	$\bar{x}, 0, \frac{1}{2}$			
2 <i>c</i> 2..	$x, 0, 0$	$\bar{x}, 0, 0$			
1 <i>b</i> 222	0, 0, $\frac{1}{2}$				
1 <i>a</i> 222	0, 0, 0				

Symmetry of special projections

Along [001] $2mm$

Origin at 0, 0, z

Along [100] $\rho 2mm$

$\mathbf{a}' = \mathbf{c}$
Origin at $x, 0, 0$

Along [010] $\rho 2mm$

$\mathbf{a}' = \mathbf{c}$
Origin at 0, $y, 0$

Maximal non-isotypic non-enantiomorphic subgroups

I [2] $\rho 112$ (8) 1; 2
 [2] $\rho 121$ ($\rho 211$, 3) 1; 3
 [2] $\rho 211$ (3) 1; 4

IIa none

IIb [2] $\rho 222_1$ ($\mathbf{c}' = 2\mathbf{c}$) (14)

Maximal isotypic subgroups and enantiomorphic subgroups of lowest index

IIc [2] $\rho 222$ ($\mathbf{c}' = 2\mathbf{c}$) (13)

Minimal non-isotypic non-enantiomorphic supergroups

I [2] ρmmm (20); [2] ρccm (21); [2] $\rho 422$ (30); [2] $\rho 4_222$ (32); [2] $\rho \bar{4}2m$ (37); [2] $\rho \bar{4}2c$ (38); [3] $\rho 622$ (62); [3] $\rho 6_222$ (64); [3] $\rho 6_422$ (66)

II none