

$\mu 6_4$

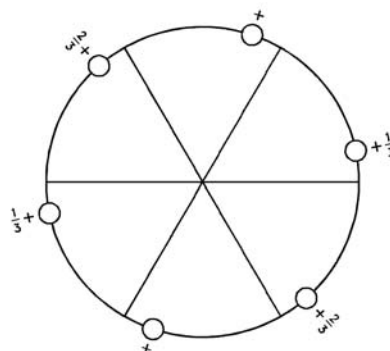
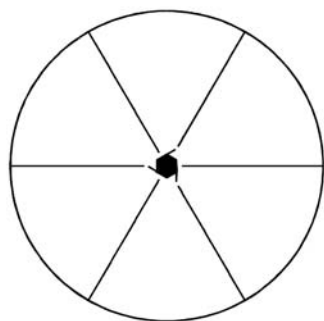
6

Hexagonal

No. 57

$\mu 6_4$

Patterson symmetry $\mu 6/m$



Origin on 2 on 6_4

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

Symmetry operations

- | | | |
|----------------------------------|---|---|
| (1) 1
(1 0,0,0) | (2) $3^+(\frac{1}{3})$ 0,0,z
(3_z^- 0,0, $\frac{1}{3}$) | (3) $3^-(\frac{2}{3})$ 0,0,z
(3_z^- 0,0, $\frac{2}{3}$) |
| (4) 2 0,0,z
(2_z^- 0,0,0) | (5) $6^-(\frac{1}{3})$ 0,0,z
(6_z^- 0,0, $\frac{1}{3}$) | (6) $6^+(\frac{2}{3})$ 0,0,z
(6_z^- 0,0, $\frac{2}{3}$) |

Generators selected (1); $t(0,0,1)$; (2); (4)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates			Reflection conditions
6 <i>b</i> 1	(1) x, y, z (4) \bar{x}, \bar{y}, z	(2) $\bar{y}, x - y, z + \frac{1}{3}$ (5) $y, \bar{x} + y, z + \frac{1}{3}$	(3) $\bar{x} + y, \bar{x}, z + \frac{2}{3}$ (6) $x - y, x, z + \frac{2}{3}$	General: $l : l = 3n$ Special: no extra conditions
3 <i>a</i> 2..	0, 0, z	0, 0, $z + \frac{1}{3}$	0, 0, $z + \frac{2}{3}$	

Symmetry of special projections

Along [001] 6	Along [100] $\mu 11m$	Along [210] $\mu 11m$
Origin at 0, 0, z	$\mathbf{a}' = \mathbf{c}$ Origin at $x, 0, 0$	$\mathbf{a}' = \mathbf{c}$ Origin at $x, \frac{1}{2}x, 0$

Maximal non-isotypic non-enantiomorphic subgroups

I [2] $\mu 3_1$ (43) 1; 2; 3
[3] $\mu 112$ (8) 1; 4

IIa none

IIb [2] $\mu 6_5$ ($\mathbf{c}' = 2\mathbf{c}$) (58)

Maximal isotypic subgroups and enantiomorphic subgroups of lowest index

IIc [2] $\mu 6_2$ ($\mathbf{c}' = 2\mathbf{c}$) (55); [7] $\mu 6_4$ ($\mathbf{c}' = 7\mathbf{c}$) (57)

Minimal non-isotypic non-enantiomorphic supergroups

I [2] $\mu 6_4 22$ (66)

II [3] $\mu 6$ ($\mathbf{c}' = \frac{1}{3}\mathbf{c}$) (53)