

$\mu\bar{6}$

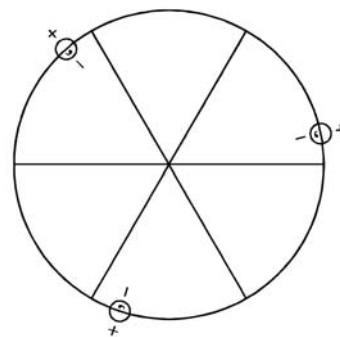
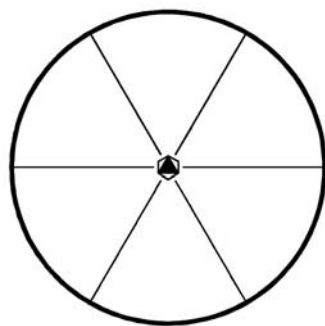
$\bar{6}$

Hexagonal

No. 59

$\mu\bar{6}$

Patterson symmetry  $\mu\bar{6}/m$



Origin at  $\bar{6}$

Asymmetric unit  $0 \leq x; 0 \leq y; 0 \leq z \leq \frac{1}{2}$

Symmetry operations

- |               |                              |                              |
|---------------|------------------------------|------------------------------|
| (1) 1         | (2) $3^+ 0,0,z$              | (3) $3^- 0,0,z$              |
| (4) $m x,y,0$ | (5) $\bar{6}^- 0,0,z; 0,0,0$ | (6) $\bar{6}^+ 0,0,z; 0,0,0$ |

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

**Positions**

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

**Symmetry of special projections**

Along [001] 3	Along [100] $\bar{6} 1 m 1$	Along [210] $\bar{6} 1 m 1$
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**

<b>I</b>	$[2] \bar{6} 3 (42)$	1; 2; 3
	$[3] \bar{6} 1 1 m (10)$	1; 4

**IIa** none

**IIb** none

**Maximal isotypic subgroups and enantiomorphic subgroups of lowest index**

**IIc**  $[2] \bar{6} (\mathbf{c}' = 2\mathbf{c}) (59)$

**Minimal non-isotypic non-enantiomorphic supergroups**

<b>I</b>	$[2] \bar{6} / m (60)$ ; $[2] \bar{6}_3 / m (61)$ ; $[2] \bar{6} m 2 (71)$ ; $[2] \bar{6} c 2 (72)$
<b>II</b>	none