

Hexagonal

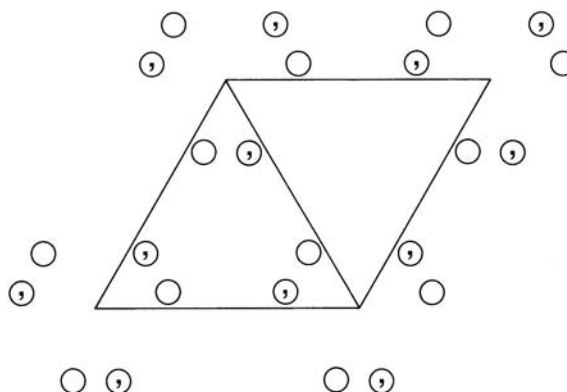
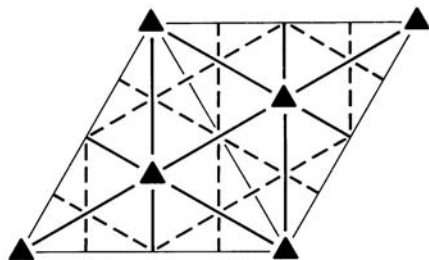
$3m$

$p3m1$

Patterson symmetry $p6mm$

$p3m1$

No. 14



Origin at $3m1$

Asymmetric unit $0 \leq x \leq \frac{2}{3}; 0 \leq y \leq \frac{2}{3}; x \leq 2y; y \leq \min(1-x, 2x)$

Vertices $0, 0 \quad \frac{2}{3}, \frac{1}{3} \quad \frac{1}{3}, \frac{2}{3}$

Symmetry operations

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

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

Positions

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

Maximal non-isomorphic subgroups

- I** [2] $p311 (p3, 13)$ 1; 2; 3
 { [3] $p1m1 (cm, 5)$ 1; 4
 [3] $p1m1 (cm, 5)$ 1; 5
 [3] $p1m1 (cm, 5)$ 1; 6

IIa none

IIb [3] $h3m1 (a' = 3a, b' = 3b) (p31m, 15)$

Maximal isomorphic subgroups of lowest index

IIc [4] $p3m1 (a' = 2a, b' = 2b) (14)$

Minimal non-isomorphic supergroups

- I** [2] $p6mm (17)$
II [3] $h3m1 (p31m, 15)$