

Status Primary    QM: Blank    Pressure/Temperature: Ambient    Chemical Formula: Rh<sub>3</sub>Se<sub>4</sub>  
 Empirical Formula: Rh<sub>3</sub>Se<sub>4</sub>    Weight %: Rh49.43 Se50.57    Atomic %: Rh42.86 Se57.14  
 Compound Name: Rhodium Selenide    Entry Date: 09/01/1969

Radiation: CuKá1    : 1.5405 Å    Filter: Ni Beta    d-Spacing: D.S.    Cutoff: 20.00    Intensity: Densimeter  
 Camera Diameter: 114.60

SYS: Hexagonal    SPGR: P  
 Author's Cell [ AuthCell a: 7.296 Å    AuthCell c: 10.986 Å    AuthCell Vol: 506.45 Å<sup>3</sup>    AuthCell Z: 3.00  
 AuthCell MolVol: 168.82 ]    Author's Cell Axial Ratio [ c/a: 1.506 ]  
 Density [ Dcalc: 6.143 g/cm<sup>3</sup>    Dmeas: 8 g/cm<sup>3</sup> ]    SS/FOM: F(30) = 1.7(0.156, 116)  
 Temp: 298.0 K (Ambient temperature assigned by ICDD editor)

Space Group: P    Molecular Weight: 624.56 g/mol  
 Crystal Data [ XtlCell a: 7.296 Å    XtlCell b: 7.296 Å    XtlCell c: 10.986 Å    XtlCell : 90.00°  
 XtlCell : 90.00°    XtlCell : 120.00°    XtlCell Vol: 506.45 Å<sup>3</sup>    XtlCell Z: 3.00 ]  
 Crystal Data Axial Ratio [ c/a: 1.506    a/b: 1.000    c/b: 1.506 ]  
 Reduced Cell [ RedCell a: 7.296 Å    RedCell b: 7.296 Å    RedCell c: 10.986 Å    RedCell : 90.00°  
 RedCell : 90.00°    RedCell : 120.00°    RedCell Vol: 506.45 Å<sup>3</sup> ]

Subfile(s): Inorganic, Metals & Alloys    Pearson Symbol: hP21.00

## References:

Type	DOI	Reference
Primary Reference		Rummery, Heyding. Can. J. Chem. 44 (1966).

Database Comments: General Comments: Superlattice cell given. Original cell: a=3.648, c=5.493. Phase stable below -663 C. Sample Preparation: Specimen quenched from 600 C. Warning: Lines with abs(delta 2Theta)>0.2 DEG. Unit Cell Data Source: Powder Diffraction.

d-Spacings (30) - Rh<sub>3</sub>Se<sub>4</sub> - 00-019-1051 (Stick, Fixed Slit Intensity) - Cu K1 1.54056 Å

2 (°)	d (Å)	I	h	k	l	*	2 (°)	d (Å)	I	h	k	l	*	2 (°)	d (Å)	I	h	k	l	*
16.3713	5.410000	15	1	0	1		43.9154	<b>2.060000</b>	100	3	0	1		65.0823	1.432000	15	3	2	1	
24.5024	3.630000	5	1	1	0		45.5695	1.989000	15	2	1	3		68.7085	1.365000	35	4	1	1	
25.9554	3.430000	5	1	1	1		50.2250	<b>1.815000</b>	75	2	2	0		72.2217	1.307000	5	2	1	7	
28.4006	3.140000	25	2	0	0		50.5827	1.803000	5	2	1	4		73.2612	1.291000	5	4	1	3	
29.5542	3.020000	10	2	0	1		52.1321	1.753000	5	3	1	0		75.7250	1.255000	5	5	0	1	
32.9015	<b>2.720000</b>	70	2	0	2		52.9775	1.727000	5	3	1	1		79.1550	1.209000	5	3	3	1	
34.8816	2.570000	15	1	1	3		56.4773	1.628000	5	2	2	3		80.2693	1.195000	10	5	0	3	
36.0401	2.490000	5	1	0	4		58.4770	1.577000	25	4	0	0		82.7806	1.165000	20	4	2	2	
37.7673	2.380000	10	2	1	0		61.1641	1.514000	25	4	0	2		87.7872	1.111000	5	5	1	2	
38.7825	2.320000	5	2	1	1		62.8681	1.477000	5	3	1	4		89.5130	1.094000	35	4	2	4	