$ErNi_3Ge_2$	*hP*72	(174) *P*-6 – $k^{11}j^{12}eda$

$ErNi_3Ge_2$ [1]
Structural features: Infinite columns of base-linked $Ge(Er_4Ni_2)Ni_3$, $Ge(Er_2Ni_4)(ErNi_2)$, $Ge(Er_2Ni_4)Ni_3$ and $GeNi_6Er_3$ tricapped trigonal prisms share atoms to form a 3D-framework with $CaCu_5$-type ($PrNi_2Al_3$) columns (7 Er atoms in the hexagonal cross-section) and propeller-like columns.

Oleksyn O.Y., Bodak O.I. (1994) [1]
$ErGe_2Ni_3$
a = 1.79662, c = 0.37941 nm, c/a = 0.211, V = 1.0606 nm^3, Z = 12

site	Wyck.	sym.	x	y	z	occ.	atomic environment
Er1	3*k*	*m*..	0.0088	0.5756	$^1/_2$		21-vertex polyhedron $Ge_7Ni_{11}Er_3$
Ni2	3*k*	*m*..	0.0906	0.159	$^1/_2$		cuboctahedron $Ge_4Ni_5Er_3$
Er3	3*k*	*m*..	0.0969	0.3366	$^1/_2$		21-vertex polyhedron $Ge_7Ni_{11}Er_3$
Ge4	3*k*	*m*..	0.1405	0.5176	$^1/_2$		icosahedron $Ni_7Er_3Ge_2$
Ge5	3*k*	*m*..	0.148	0.069	$^1/_2$		bicapped square antiprism Ni_7Er_3
Ni6	3*k*	*m*..	0.2404	0.2725	$^1/_2$		16-vertex Frank-Kasper $Ge_6Ni_7Er_3$
Ge7	3*k*	*m*..	0.2827	0.4804	$^1/_2$		trigonal prism Ni_6
Er8	3*k*	*m*..	0.3345	0.1678	$^1/_2$		16-vertex polyhedron Ge_6Ni_{10}
Ni9	3*k*	*m*..	0.4229	0.0487	$^1/_2$		16-vertex Frank-Kasper $Ge_6Ni_7Er_3$
Ge10	3*k*	*m*..	0.5217	0.2772	$^1/_2$		trigonal prism Ni_6
Ni11	3*k*	*m*..	0.5817	0.1831	$^1/_2$		cuboctahedron $Ge_4Ni_5Er_3$
Ni12	3*j*	*m*..	0.0571	0.4509	0		cuboctahedron $Ge_4Ni_4Er_4$
Ge13	3*j*	*m*..	0.1457	0.2482	0		bicapped square antiprism Ni_7Er_2Ge
Ni14	3*j*	*m*..	0.1759	0.6205	0		cuboctahedron $Ge_4Ni_4Er_4$
Ni15	3*j*	*m*..	0.1918	0.0037	0		cuboctahedron $Ge_4Ni_3Er_5$
Ni16	3*j*	*m*..	0.1962	0.1541	0		cuboctahedron $Ge_4Ni_5Er_3$
Ni17	3*j*	*m*..	0.2168	0.497	0		cuboctahedron $Ge_4Ni_4Er_4$
Ni18	3*j*	*m*..	0.2602	0.385	0		cuboctahedron $Ge_4Ni_4Er_4$
Ge19	3*j*	*m*..	0.3272	0.2933	0		bicapped square antiprism Ni_5Er_4Ge
Ge20	3*j*	*m*..	0.3363	0.041	0		bicapped square antiprism Ni_5Er_4Ge
Ni21	3*j*	*m*..	0.465	0.1803	0		cuboctahedron $Ge_4Ni_5Er_3$
Ni22	3*j*	*m*..	0.4747	0.3216	0		cuboctahedron $Ge_4Ni_3Er_5$
Ge23	3*j*	*m*..	0.5241	0.0859	0		bicapped square antiprism Ni_7Er_2Ge
Er24	1*e*	-6..	$^2/_3$	$^1/_3$	0		23-vertex polyhedron $Ge_9Ni_{12}Er_2$
Er25	1*d*	-6..	$^1/_3$	$^2/_3$	$^1/_2$		pseudo Frank-Kasper $Ge_6Ni_{12}Er_2$
Er26	1*a*	-6..	0	0	0		23-vertex polyhedron $Ge_9Ni_{12}Er_2$

Transformation from published data: $-x,-y,-z$; origin shift 0 0 $^1/_2$
Experimental: powder, diffractometer, X-rays, R_B = 0.059

Remarks: Space group (176) $P6_3/m$ was tested and rejected; we recommend space group (175) $P6/m$ be tested. In the abstract of [1] the number of formula units per cell Z is misprinted as 6 instead of 12.

References: [1] Oleksyn O.Y., Bodak O.I. (1994), J. Alloys Compd. 215, 45-49.