

Table S1. Atomic coordinates, structural occupancy factors, and equivalent isotropic and anisotropic displacement parameters (\AA^2) for $\text{BaBi}_{1.90}\text{Eu}_{0.10}\text{B}_4\text{O}_{10}$, $\text{BaBi}_{1.70}\text{Eu}_{0.30}\text{B}_4\text{O}_{10}$ and $\text{BaBi}_{1.60}\text{Eu}_{0.40}\text{B}_4\text{O}_{10}$.

BaBi_{1.56}Eu_{0.44}B₄O₁₀					
	<i>x</i>	<i>y</i>	<i>z</i>	<i>U</i> _{iso} */ <i>U</i> _{eq}	Occ. (<1)
Bi1	0.48200 (3)	0.17168 (4)	0.11937 (2)	0.01249 (9)	0.686 (9)
Eu1'	0.48200 (3)	0.17168 (4)	0.11937 (2)	0.01249 (9)	0.314 (9)
Bi2	0.73039 (3)	0.14451 (4)	0.37388 (2)	0.01211 (9)	0.888 (9)
Eu2'	0.73039 (3)	0.14451 (4)	0.37388 (2)	0.01211 (9)	0.112 (9)
Ba1	0.12748 (4)	0.09774 (6)	−0.12555 (3)	0.01208 (13)	
O1	0.3126 (5)	0.4445 (6)	−0.1063 (4)	0.0140 (15)	
O2	0.2902 (5)	0.2822 (8)	0.2227 (5)	0.0260 (19)	
O3	0.5570 (5)	−0.1368 (7)	0.0909 (4)	0.0197 (17)	
O4	−0.1361 (5)	−0.0053 (7)	−0.2313 (4)	0.0147 (15)	
O5	0.7278 (5)	0.4943 (7)	0.4089 (4)	0.0182 (16)	
O6	0.4970 (5)	0.0788 (8)	0.2956 (4)	0.0206 (17)	
O7	0.1266 (5)	−0.3287 (7)	−0.1003 (4)	0.0142 (15)	
O8	0.7127 (4)	0.2188 (7)	0.2024 (4)	0.0126 (14)	
O9	0.9461 (5)	0.0766 (7)	0.3644 (4)	0.0162 (16)	
O10	0.0872 (5)	0.2282 (7)	0.0753 (4)	0.0180 (16)	
B1	−0.1963 (8)	−0.1257 (12)	−0.1565 (7)	0.015 (2)	
B2	0.0062 (7)	0.3856 (11)	0.1046 (6)	0.011 (2)	
B3	0.3906 (8)	0.1968 (13)	0.3336 (8)	0.024 (3)	
B4	0.2162 (7)	0.5920 (11)	−0.1721 (6)	0.011 (2)	
BaBi_{1.67}Eu_{0.33}B₄O₁₀					
	<i>x</i>	<i>y</i>	<i>z</i>	<i>U</i> _{iso} */ <i>U</i> _{eq}	Occ. (<1)
Bi1	0.48344 (4)	0.17380 (6)	0.11882 (3)	0.01249 (13)	0.778 (12)
Eu1'	0.48344 (4)	0.17380 (6)	0.11882 (3)	0.01249 (13)	0.222 (12)
Bi2	0.72935 (4)	0.14643 (5)	0.37331 (3)	0.01268 (12)	0.888 (12)
Eu2'	0.72935 (4)	0.14643 (5)	0.37331 (3)	0.01268 (12)	0.112 (12)
Ba1	0.12756 (6)	0.09630 (9)	−0.12464 (5)	0.01277 (18)	
O1	0.3133 (6)	0.4411 (9)	−0.1086 (5)	0.011 (2)	
O2	0.7102 (7)	−0.2136 (10)	0.2761 (6)	0.021 (2)	
O3	0.5592 (7)	−0.1312 (10)	0.0925 (5)	0.018 (2)	
O4	−0.1336 (6)	−0.0081 (10)	−0.2296 (5)	0.013 (2)	
O5	0.7278 (6)	0.4966 (10)	0.4062 (5)	0.016 (2)	
O6	0.4956 (7)	0.0861 (10)	0.2917 (6)	0.018 (2)	
O7	0.1269 (6)	−0.3319 (9)	−0.1009 (5)	0.014 (2)	
O8	0.7124 (6)	0.2221 (10)	0.2035 (5)	0.015 (2)	
O9	0.9459 (7)	0.0785 (10)	0.3650 (6)	0.018 (2)	
O10	0.0889 (7)	0.2297 (10)	0.0764 (5)	0.016 (2)	
B1	−0.1984 (11)	−0.1256 (16)	−0.1573 (8)	0.010 (3)	
B2	0.0056 (11)	0.3872 (15)	0.1031 (9)	0.013 (3)	
B3	0.3882 (13)	0.2035 (18)	0.3296 (10)	0.020 (4)	
B4	0.2165 (10)	0.5881 (16)	−0.1732 (9)	0.011 (3)	
BaBi_{1.94}Eu_{0.06}B₄O₁₀					

	x	y	z	$U_{\text{iso}}^*/U_{\text{eq}}$	Occ. (<1)
Bi1	0.48415 (3)	0.17456 (4)	0.11871 (3)	0.01290 (10)	0.940 (7)
Eu1'	0.48415 (3)	0.17456 (4)	0.11871 (3)	0.01290 (10)	0.060 (7)
Bi2	0.72879 (3)	0.14693 (4)	0.37317 (3)	0.01319 (10)	
Ba1	0.12785 (5)	0.09550 (7)	−0.12427 (4)	0.01203 (14)	
O1	0.3122 (5)	0.4391 (8)	−0.1097 (5)	0.0132 (17)	
O2	0.7105 (6)	−0.2129 (8)	0.2754 (5)	0.0168 (18)	
O3	0.5609 (6)	−0.1293 (7)	0.0939 (5)	0.0139 (18)	
O4	−0.1337 (5)	−0.0058 (8)	−0.2301 (5)	0.0123 (17)	
O5	0.7277 (5)	0.4983 (8)	0.4062 (5)	0.0118 (17)	
O6	0.4952 (6)	0.0894 (8)	0.2908 (5)	0.0144 (18)	
O7	0.1263 (5)	−0.3341 (8)	−0.1006 (5)	0.0117 (17)	
O8	0.7139 (6)	0.2235 (8)	0.2033 (5)	0.0133 (17)	
O9	0.9446 (5)	0.0818 (8)	0.3643 (5)	0.0145 (18)	
O10	0.0893 (5)	0.2326 (8)	0.0762 (5)	0.0140 (17)	
B1	−0.1951 (9)	−0.1289 (13)	−0.1571 (8)	0.012 (3)	
B2	0.0055 (9)	0.3878 (13)	0.1055 (7)	0.0088 (16)*	
B3	0.3887 (10)	0.1971 (15)	0.3310 (9)	0.019 (3)	
B4	0.2146 (9)	0.5869 (13)	−0.1715 (7)	0.011 (2)	