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<b>Compositional Formulation</b>	<b>Abbreviations</b>	<b>Symbol of composition in Fig. 1</b>
<b>0.98[0.99(Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub>)-0.01(LiTaO<sub>3</sub>)] – 0.02[BiScO<sub>3</sub>]</b>	NKN-1LT-2BS	---
<b>0.98[0.98(Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub>)-0.02(LiTaO<sub>3</sub>)] – 0.02[BiScO<sub>3</sub>]</b>	NKN-2LT-2BS	---
<b>0.98[0.96(Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub>)-0.04(LiTaO<sub>3</sub>)] – 0.02[BiScO<sub>3</sub>]</b>	NKN-4LT-2BS	<b>A</b>
<b>0.98[0.95(Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub>)-0.05(LiTaO<sub>3</sub>)] – 0.02[BiScO<sub>3</sub>]</b>	NKN-5LT-2BS	<b>B</b>
<b>0.98[0.94(Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub>)-0.06(LiTaO<sub>3</sub>)] – 0.02[BiScO<sub>3</sub>]</b>	NKN-6LT-2BS (Standard)	<b>C</b>
<b>0.98[0.94(Na<sub>0.5</sub>K<sub>0.5</sub>NbO<sub>3</sub>)-0.06(LiTaO<sub>3</sub>)] – 0.02[BiScO<sub>3</sub>] with 3 wt% excess alkali carbonates as starting powder</b>	Excess NKN-6LT-2BS	<b>D</b>

**Table. 1** Solid solution target compositions as plotted in **Fig.1** and their abbreviations.

Abbr.		NKN-4LT-2BS	NKN-5LT-2BS		NKN-6LT-2BS		
<b>Nominal Formula</b>		(Li) (Na <sub>0.240</sub> K <sub>0.240</sub> )(Ta <sub>0.020</sub> Nb <sub>0.480</sub> )O <sub>3</sub> – (Bi <sub>0.010</sub> Sc <sub>0.010</sub> )O <sub>3</sub>	(Li) (Na <sub>0.239</sub> K <sub>0.239</sub> )(Ta <sub>0.025</sub> Nb <sub>0.477</sub> )O <sub>3</sub> – (Bi <sub>0.010</sub> Sc <sub>0.010</sub> )O <sub>3</sub>		(Li) (Na <sub>0.237</sub> K <sub>0.237</sub> )(Ta <sub>0.030</sub> Nb <sub>0.475</sub> )O <sub>3</sub> – (Bi <sub>0.010</sub> Sc <sub>0.010</sub> )O <sub>3</sub>		
<b>Local Region</b>			<b>Core</b>	<b>Shell</b>	<b>Core</b>	<b>Shell 1</b>	<b>Shell 2</b>
<b>Element</b>	Na	27.8	28.7	27.8	26.1	23.1	25
	K	21.3	21.8	20.9	20.3	22.3	19.6
	Ta	3.1	1.4	4.1	1.6	4.4	4.9
	Bi	1.3	0.4	1.8	0.4	0.8	1.4
	Sc	0.7	0.3	1.0	0.2	0.7	1.2
	Nb	45.8	47.4	44.4	51.3	48.6	47.9
<b>Calculated Formula*</b>		(Li) (Na <sub>0.278</sub> K <sub>0.213</sub> )(Ta <sub>0.031</sub> Nb <sub>0.4581</sub> )O <sub>3</sub> – (Bi <sub>0.013</sub> Sc <sub>0.007</sub> )O <sub>3</sub>	<b>Core:</b> (Li) (Na <sub>0.287</sub> K <sub>0.218</sub> )(Ta <sub>0.014</sub> Nb <sub>0.474</sub> )O <sub>3</sub> – (Bi <sub>0.004</sub> Sc <sub>0.003</sub> )O <sub>3</sub> <b>Shell:</b> (Li) (Na <sub>0.278</sub> K <sub>0.209</sub> )(Ta <sub>0.041</sub> Nb <sub>0.444</sub> )O <sub>3</sub> – (Bi <sub>0.018</sub> Sc <sub>0.010</sub> )O <sub>3</sub>		<b>Core:</b> (Li) (Na <sub>0.261</sub> K <sub>0.203</sub> )(Ta <sub>0.016</sub> Nb <sub>0.513</sub> )O <sub>3</sub> – (Bi <sub>0.004</sub> Sc <sub>0.002</sub> )O <sub>3</sub> <b>Shell 1:</b> (Li) (Na <sub>0.231</sub> K <sub>0.223</sub> )(Ta <sub>0.044</sub> Nb <sub>0.486</sub> )O <sub>3</sub> – (Bi <sub>0.008</sub> Sc <sub>0.007</sub> )O <sub>3</sub> <b>Shell 2:</b> (Li) (Na <sub>0.250</sub> K <sub>0.196</sub> )(Ta <sub>0.049</sub> Nb <sub>0.479</sub> )O <sub>3</sub> – (Bi <sub>0.014</sub> Sc <sub>0.012</sub> )O <sub>3</sub>		

**Table. 2** TEM-EDX data (atomic%) for NKN-xLT-2BS specimens, x= 4-6 mol%. The nominal target chemical formula of the solid solution (upper row) and formula calculated from EDX data (lower row) are presented. ( Note: Li could not be detected by the EDX technique).