

Table IV. Glaze composition of all samples determined by SEM-EDS (wt%). *avg*: average over at least two areas of the ceramics. *std*: standard deviation of the measurements.

Date	Accession number of selected tile		Na ₂ O	MgO	Al ₂ O ₃	SiO ₂	Cl	K ₂ O	CaO	MnO	FeO	CuO	SnO ₂	PbO
13 th century	EAX.289.b	avg	9.2	2.8	1.4	57.8	0.7	2.5	3.1	-	0.7	-	10.1	11.7
		std	0.9	0.5	0.1	3.1	0.1	0.1	0.5		0.1		2.4	1.5
	1838B-1876	avg	9.5	2.2	1.3	52.7	0.8	2.3	2.6	-	0.6	-	8.7	19.5
		std	0.2	0.1	0.1	0.6	0.1	0.1	0.2		0.0		0.2	0.5
	1077A-1892	avg	9.1	2.3	2.3	56.5	0.6	3.0	3.9		0.7	-	6.9	14.4
		std	0.2	0.1	0.1	1.2	0.0	0.0	0.2		0.1		0.0	0.8
	1837H-1876	avg	8.6	2.5	2.5	59.3	0.7	2.8	4.2	-	0.9	0.5	8.0	9.9
		std	0.4	0.3	0.5	0.5	0.1	0.0	0.4		0.2	0.2	0.7	0.3
	1837L-1876	avg	8.5	1.8	3.6	58.5	0.7	2.8	4.4	-	0.8	0.3	7.4	11.0
		std	0.2	0.2	1.8	1.9	0.0	0.2	0.4		0.1	0.0	1.8	1.4
19 th century	567-1988	avg	10.5	4.3	1.8	69.0	0.8	2.5	9.0	0.3	0.7	-	0.7	-
		std	1.1	0.2	0.7	2.1	0.1	0.2	2.4	0.0	0.2		0.0	

Citation: Trinitat Pradell, Judit Molera, Moujan Matin, and Keelan Overton. “Microanalytical and Microstructural Analysis of Thirteenth-Century Luster Tiles Attributed to the Emamzadeh Yahya in Varamin, including a Comparison to a Nineteenth-Century Imitation ‘Luster’ Tile by ‘Ali Mohammad Esfahani.’” Essay in *The Emamzadeh Yahya at Varamin: An Online Exhibition of an Iranian Shrine*. 33 Arches Productions, June 7, 2026. Host: Khamseen: Islamic Art History Online.

Direct links to [this essay](#), the [Luster gallery](#), and the Emamzadeh Yahya [website](#).