

# Supplementary Materials

## Biosignatures in Subsurface Filamentous Fabrics (SFF) from the Deccan Volcanic Province, India

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**Table S1.** Results of local chemical analyses (SEM-EDX) of celadonite, mordenite, and the filamentous core of SFF in samples from Jalgaon/Savda, India. The locations of the analytical points FC2 and FC3 in sample Jal 33 are shown in Figure 10d.

Sample	Celadonite		Mordenite		Filamentous Core (FC)		
	Jal 30	Jal 31	Jal 32	Jal 31	Jal 33	Jal 33	
				FC1	FC2	FC3	
Si [at%]	22.26	23.16	23.07	18.66	17.00	17.73	
Al	1.11	5.23	5.55	3.25	4.35	3.96	
Ca	-	1.37	1.32	0.96	1.03	1.38	
Na	0.39	1.56	1.29	0.52	0.80	0.94	
K	5.00	0.11	0.24	1.18	0.25	0.09	
Mg	3.82	0.05	-	5.81	6.81	6.45	
Fe	7.36	0.05	-	9.91	10.43	9.85	
O	60.06	68.47	68.54	59.72	59.32	59.60	

**Table S2.** Results of local chemical analyses of core filaments in sample Jal 11 by SEM-EDX. Z refers to zeolite (mordenite) and S to smectite; the analytical points of Z1 and S1 are shown in Figure 11e.

Jal 11	Mordenite			Smectite					
	Z1	Z2	S1	S2	S3 <sup>1</sup>	S4	S5	S6	
Si [at%]	21.19	21.97	16.82	17.64	21.37	16.80	19.43	17.52	
Al	4.90	5.18	5.72	6.45	3.42	4.15	5.81	5.03	
Ca	1.25	1.33	0.76	0.86	0.93	0.72	1.14	1.08	
Na	1.07	0.50	0.32	0.23	0.01	0.33	0.55	-	
Mg	0.56	0.82	2.44	2.56	2.43	2.44	1.53	2.15	
Fe	0.23	0.27	0.88	1.06	4.62	2.02	0.51	1.13	
O	70.80	69.93	73.07	71.20	67.22	73.54	71.03	73.09	

<sup>1</sup> Probably a mixture of smectite with SiO<sub>2</sub> and Fe-oxides/hydroxides.

**Table S3.** Results of local chemical analyses (SEM-EDX) of selected areas of the filamentous core in sample Jal 05 (analytical spots are shown in Figure 13c).

Jal 05	Filamentous Core (FC)			
	1	2	3	4
Si [at%]	9.79	13.35	13.91	11.87
Al	2.51	3.73	3.98	3.12
K	-	-	-	-
Ca	1.88	1.99	1.65	1.49
Na	-	-	-	-
Mg	3.05	5.34	5.76	3.71
Fe	7.43	7.79	7.51	7.24
O	75.34	67.80	67.19	72.57
C	++	++	++	++ <sup>1</sup>

<sup>1</sup> Carbon excess (not quantified).

**Table S4.** Results of SEM-EDX analyses of the innermost filamentous core of sample Jal Sm 01 (for analytical spots compare Figure 14d) as well as smectite (Figure 14f).

Jal Sm 01	Filamentous Core (FC)			Smectite	
	FC 1	FC 2	FC 3	S1	S2
Si [at%]	10.85	9.37	8.54	12.69	14.51
Al	1.47	2.43	2.58	3.49	3.66
Ca	5.45	1.15	0.81	2.19	2.04
Na	0.15	-	-	-	-
Mg	0.39	4.16	4.69	4.76	4.97
Fe	3.04	2.92	2.90	9.22	9.98
K	-	-	-	-	-
O	78.65	79.77	80.38	67.65	64.84
C	++	++	++		

**Table S5.** Results of SEM-EDX measurements of selected areas of the filamentous core of sample Jam 01 (for analytical spots compare Figure 16c).

Jam 01	Filamentous Core (FC)			
	1	2	3	4
Si [at%]	24.18	15.24	14.94	14.20
Al	0.10	1.44	1.09	1.67
K	0.25	1.56	1.27	0.26
Ca	1.11	0.40	0.48	0.62
Na	0.08	0.34	0.01	0.86
Mg	2.44	2.29	1.67	2.33
Fe	7.65	6.03	5.30	4.60
O	62.46	72.60	75.23	75.47

**Table S6.** Results of local chemical analyses of zeolite/mica minerals in the filamentous core of sample Jam 10 by SEM-EDX; Heu = heulandite/clinoptilolite (Figure 17c); Cel = celadonite (Figure 17e), Mor = mordenite (Figure 17d); Stil = stilbite (Figure 17f).

Jam 10	Heu	Cel	Mor	Stil
Si [at%]	19.39	21.84	23.11	16.63
Al	6.15	2.19	3.95	5.09
Ca	2.62	0.62	1.01	3.00
Na	0.68	1.53	1.30	1.34
Mg	-	1.34	-	-
Fe	-	5.35	-	-
K	-	3.46	-	-
O	71.16	63.67	70.29	73.94

**Table S7.** Results of SEM-BSE analyses showing the chemical composition of different filament zones in sample Jln 01 (Jalna, compare Figure 18d); 1 = celadonite, 3 = silica; 2, 4 = mixture of celadonite and silica.

Jln 01	1	2	3	4
Si [at%]	21.72	31.30	32.37	29.47
Al	2.13	0.45	0.23	0.55
K	3.51	0.68	0.05	1.39
Mg	2.79	0.27	-	0.83
Fe	7.85	0.73	0.02	1.43
O	62.00	66.57	67.33	66.33