















Supplementary Information 3

Suryanarayan et al.

Table S.1: Details of all analysed vessels from Alamgirpur. Vessel fragments marked with * had lipid concentrations lower than 5 µg/g and were excluded from analysis.

<i>S.No.</i>	<i>Sample No.</i>	<i>Trench/Context</i>	<i>Rim/Base/Body</i>	<i>Rim diam</i>	<i>Vessel form</i>	<i>Image (Front)</i>	<i>Image (Back)</i>
1	ALM 114-252	SC-114	rim	30	large jar		
2	ALM 117-275	SC-117	rim/ neck	NA	jar		
3	ALM 117-276	SC-117	rim/ neck	NA	jar		
4	ALM 117-279	SC-117	rim	12	small jar		
5	ALM 119-363	SC-119	rim	15	dish		
6	ALM 119-370	SC-119	rim	10	small jar		
7	ALM 121-387	SC-121	rim	10	small necked jar		

8	ALM 122-397	SC-122	rim	12	small jar
9	ALM 124-460	SC-124	rim	12	small necked jar
10	ALM 125-475	SC-125	rim	10	small necked jar
11	ALM 125-479	SC-125	rim	13	medium jar
12	ALM 125-481	SC-125	rim	20	necked jar
13	ALM 126-491	SC-125	rim	10	small jar
14	ALM 126-494	SC-125	rim	20	dish
15	ALM 121-385*	SC-121	body		jar?

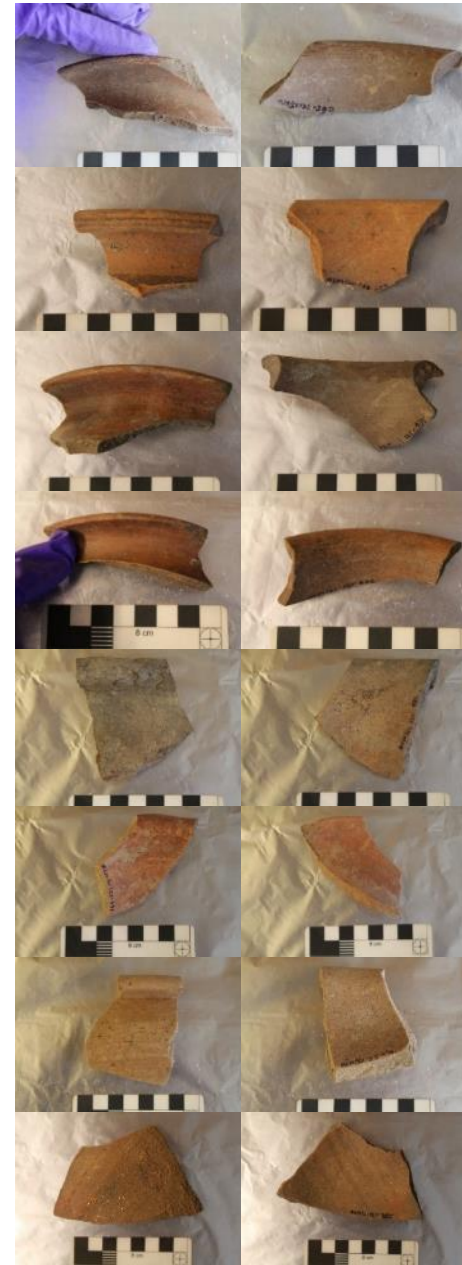
















Table S.2: List of analysed samples from Alamgirpur with lipid concentrations $<5 \mu\text{g/g}$. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and $\delta^{13}\text{C}$ values of the $\text{C}_{18:0}$, and $\text{C}_{16:0}$ fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract.

S.No.	Sample ID	Rim/ Base/ Body	Vessel form	Rim size (cm)	Chrono logical period	During or post- 4.2 ka	Lipid concentra tion ($\mu\text{g/g}$)	Lipid composition				P/S ratio ($C_{16:0}/C_{18:0}$)	$\delta^{13}\text{C}$ $C_{16:0}$	$\delta^{13}\text{C}$ $C_{18:0}$	$\Delta^{13}\text{C}$ ($C_{18:0}$ - $C_{16:0}$)
								FAs	UFAs	Br	Diacids				
1	ALM114-252	rim	large jar	30	LH	Post 4.2 ka	8.5	C14-C18; C16	16:1, C18:1, C22:1	C15Br, C17Br	Present	2.4	-29.0	-28.7	0.3
2	ALM117-275	rim	jar	NA	LH	Post 4.2 ka	11.1	C14-C24; C16	16:1, C18:1, C22:1			1.8	-29.0	-29.0	0.0
3	ALM117-276	rim	jar	NA	LH	Post 4.2 ka	6.9	C16-18, C20; C16	16:1, C18:1, C22:1		Present	1.2			
4	ALM117-279	rim	small jar	12	LH	Post 4.2 ka	9.9	C14-C18, C20, C22; C16	16:1, C18:1, C22:1	C15Br, C17Br		1.5	-28.9	-29.4	-0.5
5	ALM119-363	rim	dish	15	LMH	During	6.7	C16, C18; C16	C18:1, C22:1			1.1			
6	ALM119-370	rim	small jar	10	LMH	During	25.1	C14-C18, C20, C22, C24; C16	16:1, C18:1, C22:1	C15Br, C17Br		2.1	-27.8	-28.6	-0.7
7	ALM121-387	rim	small necked jar	10	LMH	During	5.1	C16, C18; C16	C18:1			1.2			
8	ALM122-397	rim	small jar	12	LMH	During	15.2	C12-C18, C20, C22, C24; C16	16:1, C18:1, C22:1	C15Br, C17Br		2.6	-28.5	-28.6	-0.1
9	ALM124-460	rim	small necked jar	12	LMH	During	23.8	C12-C18, C20, C22, C24; C16	16:1, C18:1, C22:1	C15Br, C17Br	Present	1.8	-28.0	-28.0	0.0
10	ALM125-475	rim	small necked jar	10	LMH	During	26.3	C14-C18, C20, C22, C24; C16	16:1, C18:1, C22:1	C15Br, C17Br		2.1	-27.8	-28.0	-0.1
11	ALM125-479	rim	Medium jar	13	LMH	During	42.4	C12-C18, C20, C22; C16	16:1, C18:1, C22:1	C15Br, C17Br		2.1			
12	ALM125-481	rim	necked jar	20	LMH	During	11.9	C12, C14, C16, C18 C20; C16	C16:1, C18:1, C22:1			1.6	-29.5	-29.8	-0.3

13	ALM125-494	rim	dish	20	LMH	During	9.5	C14-C18, C20; C16	C18:1, C22:1	Present	1.7	-28.7	-28.3	0.4
14	ALM126-491	rim	small jar	10	LMH	During	13.2	C14-C18; C16	C16:1, C18:1	Present	1.5	-28.9	-29.2	-0.3

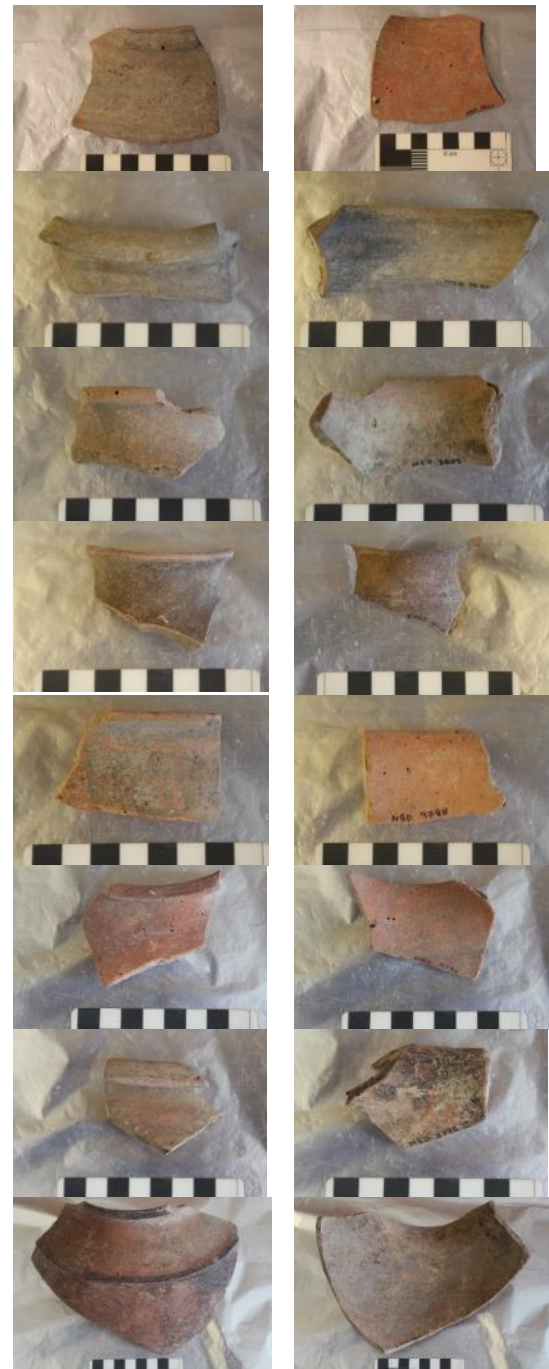
Table S.3: Details of all analysed vessels from Masudpur VII. Vessel fragments marked with * had lipid concentrations lower than 5 $\mu\text{g/g}$ and were excluded from analysis. Photos with blue background courtesy Danika Parikh.

<i>S.No.</i>	<i>Sample No.</i>	<i>Trench/Context</i>	<i>Rim/Base/Body</i>	<i>Rim diam</i>	<i>Vessel form</i>	<i>Image (Exterior)</i>	<i>Image (Interior)</i>
1	MSD 1788	YA2-401	body	NA	perforated vessel		
2	MSD 1799	YA2-401	body	NA	perforated vessel		
3	MSD 1800	YA2-402	rim	12	ledged jar		
4	MSD 1873	YA2-402	body	NA	perforated vessel		
5	MSD 2115	YA2-407	rim	13	medium jar		
6	MSD 2116	YA2-407	rim	12	small jar		
7	MSD 2209	YA2-418	rim	27	bowl		

8	MSD 2211	YA2-418	rim	NA	jar
9	MSD 3392	YB1-513	rim	15	bowl
10	MSD 3402	YB1-513	rim	NA	jar
11	MSD 3412A	YB1-513	rim	15	necked jar
12	MSD 3458	YB1-513	body	NA	perforated vessel
13	MSD 3576	YB1-515	rim	NA	jar
14	MSD 3585	YB1-515	rim	NA	ledged jar
15	MSD 3586	YB1-515	rim	8	ledged jar



16	MSD 3587	YB1-515	rim	9	small jar
17	MSD 3590	YB1-515	rim	NA	jar
18	MSD 3602	YB1-515	rim	NA	jar
19	MSD 3603	YB1-515	rim	NA	jar
20	MSD 3788	YB1-517	rim	NA	jar
21	MSD 3794	YB1-517	rim	NA	jar
22	MSD 3795	YB1-517	rim	NA	jar
23	MSD 3809	YB1-517	rim	8.5	ledged jar









24	MSD 3810	YB1-517	rim	10	ledged jar	
25	MSD 3813	YB1-517	rim	8	small jar	
26	MSD 3816	YB1-517	rim	8	necked jar	
27	MSD 3845	YB1-517	body	NA	perforated vessel	
28	MSD 3846	YB1-517	body	NA	perforated vessel	
29	MSD 3410*	YB1-513	rim		ledged jar	

Table S.4: List of analysed samples from Masdupur VII with lipid concentrations <5 µg/g. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and δ¹³C values of the C_{18:0}, anission to scientific reportsd C_{16:0} fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract

















S.No.	Sample ID	Rim/ Base/ Body	Vessel shape	Rim size (cm)	Chrono logical period	Before, during or post- 4.2 ka	Lipid concent ration (µg/g)	Lipid composition				P/S ratio (C18: 0- C16:0)	δ ¹³ C C _{16:0}	δ ¹³ C C _{18:0}	Δ ¹³ C (C _{18:0} - C _{16:0})	
								FAs	UFAs	Br	Diacids					
1	MSD1788	body	perforate d vessel	NA	LH	Post-4.2 ka	23.8	C15-C18, C20, C22, C24; C16, C18	C16:1, C18:1, C22:1				0.7	-26.7	-27.3	-0.6
2	MSD1799	body	perforate d vessel	NA	LH	Post-4.2 ka	16.0	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.2	-28.2	-28.6	-0.4	
3	MSD1800	rim	ledged jar	12	LH	Post-4.2 ka	12.5	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.5				
4	MSD1873	body	perforate d vessel	NA	LH	Post-4.2 ka	17.4	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.7	-29.0	-28.5	0.5	
5	MSD2115	rim	medium jar	13	EMH	Before	23.5	C12, C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br		1.8	-26.7	-25.6	1.1	
6	MSD2116	rim	small jar	12	EMH	Before	39.6	C12, C14-C18, C20, C22, C24, C26; C16, C18	C16:1, C18:1, C22:1	C15Br, C17Br		1.3	-27.9	-28.3	-0.4	
7	MSD2209	rim	large bowl	27	EMH	Before	17.0	C14-C18, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.4	-29.0	-28.7	0.3	
8	MSD2211	rim	jar	NA	EMH	Before	6.2	C14-C18; C16	C16:1, C18:1, C22:1			1.3				
9	MSD3392	rim	bowl	15	LH	Post-4.2 ka	11.6	C14-18; C20, C22, C24; C16	C16:1, C18:1, C20:1,	C15Br, C17Br	Present	2.2	-26.7	-27.7	-0.9	







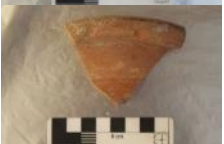



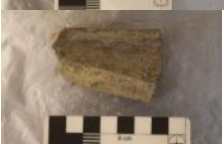


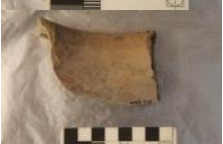




													C22:1		
10	MSD3402	rim	jar	NA	LH	Post-4.2 ka	9.2	C14-18; C20, C22, C24; C16	C18:1, C22:1		1.2	-23.3	-24.7	-1.5	
11	A	rim	necked jar	15	LH	Post-4.2 ka	219.3	C12-C18, C20, C22, C24; C16, C18	C16:1, C18:1, C20:1, C22:1	C15Br, C17Br	Present	1.0	-24.8	-24.5	0.4
12	MSD3458	body	perforate d vessel	NA	LH	Post-4.2 ka	5.8	C14, C15, C16, C18, C20; C16	C18:1, C22:1			1.1			
13	MSD3576	rim	jar	NA	LH	Post-4.2 ka	14.1	C14-18; C20, C22; C16	C16:1, C18:1, C22:1			1.0	-30.0	-30.3	-0.3
14	MSD3585	rim	ledged jar	NA	LH	Post-4.2 ka	63.3	C12-C18, C20, C22, C24, C26; C16	C14:1, C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.6	-27.8	-28.5	-0.7
15	MSD3586	rim	ledged jar	8	LH	Post-4.2 ka	66.7	C12-C26; C14, C16, C18	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.4	-15.4	-19.6	-4.2
16	MSD3587	rim	small jar	9	LH	Post-4.2 ka	17.1	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.0	-29.0	-29.0	0.0
17	MSD3590	rim	jar	NA	LH	Post-4.2 ka	8.4	C14-C18; C16	C16:1, C18:1, C22:1	C15Br, C17Br		2.5			
18	MSD3602	rim	jar	NA	LH	Post-4.2 ka	23.9	C14-C18, C20, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br		2.0	-29.0	-30.0	-1.0
19	MSD3603	rim	jar	NA	LH	Post-4.2 ka	31.0	C12, C14-C18, C20, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.6	-25.6	-24.9	0.7
20	MSD3788	rim	jar	NA	LH	Post-4.2 ka	13.5	C12-C18; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.0	-28.7	-30.3	-1.5
21	MSD3794	rim	jar	NA	LH	Post-4.2 ka	20.1	C12, C14-C18, C20, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.2	-28.7	-29.5	-0.8


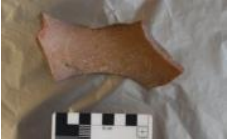














22	MSD3795	rim	jar	NA	LH	Post-4.2 ka	46.2	C12-C18, C20, C22, C24, C26; C16, C18	C14:1, C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.4	-26.7	-25.6	1.2
23	MSD3809	rim	ledged jar	8.5	LH	Post-4.2 ka	58.7	C12-C18, C20, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.9	-23.1	-21.3	1.9
24	MSD3810	rim	ledged jar	10	LH	Post-4.2 ka	21.0	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br	Present	1.1	-28.3	-28.6	-0.3
25	MSD3813	rim	small jar	8	LH	Post-4.2 ka	13.7	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br		1.8	-29.4	-29.7	-0.3
26	MSD3816	rim	necked jar	8	LH	Post-4.2 ka	8.6	C12, C14- C18; C16	C18:1, C22:1			1.3			
27	MSD3845	body	perforate d vessel	NA	LH	Post-4.2 ka	13.6	C12-C18; C16	C16:1, C18:1; C22:1	C15Br, C17Br		3.9			
28	MSD3846	body	perforate d vessel	NA	LH	Post-4.2 ka	21.8	C14-C18, C20, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.1			

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Table S.5: Details of all analysed vessels from Masudpur VII. Vessel fragments marked with * had lipid concentrations lower than 5 µg/g and were excluded from analysis.

S.No.	Sample No.	Trench/Context	Rim/Base/Body	Rim diam	Vessel form	Image (Exterior surface)	Image (Interior surface)
1	MSD 191	XA1-110	rim	14	medium jar		
2	MSD 192	XA1-110	rim	14	medium necked jar		
3	MSD 194	XA1-110	rim	15	medium jar		
4	MSD 198	XA1-110	rim	NA	jar - rim diam unknown		
5	MSD 199	XA1-110	rim	13	medium jar		
6	MSD 200	XA1-110	rim	12.5	medium jar		
7	MSD 214	XA1-110	rim	16	medium jar		
8	MSD 215	XA1-110	rim	12	medium jar		

9	MSD 218	XA1-110	rim	18	large jar		
10	MSD 259	XA1-110	rim	15	medium necked jar		
11	MSD 262	XA1-110	rim	14	medium necked jar		
12	MSD 264	XA1-110	rim	16	medium necked jar		
13	MSD 266	XA1-110	rim	15	medium necked jar		
14	MSD 271	XA1-110	rim	28	large jar		
15	MSD 273	XA1-110	rim	12	small jar		
16	MSD 329	XA1-110	rim	14	medium necked jar		
17	MSD 343	XA1-110	rim	9	small jar		

18	MSD 1326	XM2-308	rim	10	small jar		
19	MSD 1557	XM2-316	body	NA	perforated vessel		
20	MSD 1597	XM2-317	body	NA	jar - rim diam unknown		
21	MSD 1599	XM2-317	rim	13	medium necked jar		
22	MSD 1601	XM2-317	rim	12.5	medium jar		
23	MSD 1602	XM2-317	rim	20	large jar		
24	MSD 1712	XM2-321	rim	9.5	small necked jar		
25	MSD 221*	x	base		large jar?		

26	MSD 258*	x	rim	large jar
27	MSD 1387*	x	rim	x
28	MSD 1562*	x	rim	x
29	MSD 1598*	x	rim	x
30	MSD 1600*	x	rim	x
31	MSD 1710*	x	rim	perforated bowl

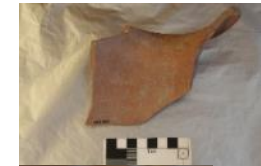



























Table S.6: List of analysed samples from Masudpur I with lipid concentrations <5 µg/g. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and δ¹³C values of the C_{18:0}, and C_{16:0} fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract.

S.No.	Sample ID	Rim/ Base/ Body	Vessel forme	Rim size (cm)	Chrono logical period	Durin g or post- 4.2 ka	Lipid concentratio n (µg/g)	Lipid composition				P/S ratio (C _{18:0} - C _{16:0})	δ ¹³ C C _{16:0}	δ ¹³ C C _{18:0}	Δ ¹³ C (C _{18:0} - C _{16:0})
								FAs	UFAs	Br	Diacids				
1	MSD191	rim	medium jar	14	LMH	During	23.3	C12-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.1	-27.3	-27.4	-0.2
2	MSD192	rim	medium necked jar	14	LMH	During	6.6	C14-C18, C20, C22; C16	C16:1, C18:1			2.0	-28.1	-28.0	0.1
3	MSD194	rim	medium jar	15	LMH	During	9.1	C14-C18; C16	C16:1, C18:1, C22:1	C15Br		1.9			
4	MSD198	rim	jar - rim diam unknown	NA	LMH	During	7.3	C14-C18; C16	C16:1, C18:1, C22:1	C15Br		2.0			
5	MSD199	rim	medium jar	13	LMH	During	79.4	C12-C18, C20, C22, C24, C26; C16	C16:1, C18:1, C22:1	C15Br, C17Br		1.5	-20.4	-19.9	0.5
6	MSD200	rim	medium jar	12.5	LMH	During	11.6	C12-C18; C16	C16:1, C18:1, C22:1			2.0	-28.4	-28.7	-0.3
7	MSD214	rim	medium jar	16	LMH	During	30.1	C12-18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.5	-28.0	-27.7	0.4
8	MSD215	rim	medium jar	12	LMH	During	5.4	C14-C18; C16	C18:1			2.0			
9	MSD218	rim	large jar	18	LMH	During	57.7	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	2.5	-27.7	-27.0	0.7
10	MSD259	rim	medium jar	15	LMH	During	8.4	C14-C18, C20; C16	C16:1, C18:1, C22:1	C15Br, C17Br		2.2			

11	MSD262	rim	medium necked jar	14	LMH	During	8.5	C14-C18, C20, C22; C16	C16:1, C18:1	C17Br		1.4			
12	MSD264	rim	medium necked jar	16	LMH	During	24.6	C12-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C17Br	Present	1.5	-30.3	-30.3	0.0
13	MSD266	rim	medium necked jar	15	LMH	During	5.4	C14, C16, C18; C16	C16:1, C18:1, C22:1			1.9			
14	MSD271	rim	large jar	28	LMH	During	5.0	C16, C18; C16	C18:1, C22:1			0.8			
15	MSD273	rim	small jar	12	LMH	During	15.8	C12-C18, C20, C22, C24; C16	C16:1, C18:1, C22:1	C15Br	Present	1.5	-29.8	-30.3	-0.5
16	MSD329	rim	medium necked jar	14	LMH	During	38.3	C12-C18, C20; C16, C18	C16:1, C18:1,	C15Br, C17Br	Present	1.2	-14.7	-18.7	-4.1
17	MSD343	rim	small jar	9	LMH	During	122.6	C12-C18, C20, C22, C24, C26, C28; C16	C16:1, C18:1, C22:1	C15Br, C17Br	Present	1.2	-22.4	-22.6	-0.2
18	MSD1326	rim	small jar	10	LMH	During	23.5	C12-C18, C20, C22, 24; C16	C16:1, C18:1	C15Br	Present	1.7	-26.7	-27.3	-0.6
19	MSD1557	body	perforated vessel	NA	LMH	During	23.3	C15-C18, C20, C22; C18	C18:1, C22:1		Present	0.8	-29.2	-29.3	-0.1
20	MSD1597	body	jar - rim diam unknown	NA	LMH	During	13.0	C14, C16, C18, C20; C16	C16:1, C18:1, C22:1		Present	1.4	-29.5	-29.6	-0.1
21	MSD1599	rim	medium necked jar	13	LMH	During	5.5	C14-C18; C16	C16:1, C18:1, C22:1			2.0			
22	MSD1601	rim	medium jar	12.5	LMH	During	14.0	C12-C18; C16	C16:1, C18:1, C22:1	C15Br	Present	1.4			
23	MSD1602	rim	large jar	20	LMH	During	10.1	C12, C14-C18; C16	C16:1, C18:1	C15Br, C17Br	Present	2.4			
24	MSD1712	rim	small necked jar	9.5	EMH	Before	10.2	C14-C18, C20, C22; C16	C16:1, C18:1, C22:1		Present	1.2	-28.2	-27.0	1.2

Table S.7: Details of all analysed vessels from Lohari Ragho I. Vessel fragments marked with * had lipid concentrations lower than 5 µg/g and were excluded from analysis.

<i>S.No.</i>	<i>Sample No.</i>	<i>Trench/Context</i>	<i>Rim/Base/Body</i>	<i>Rim diam</i>	<i>Vessel form</i>	<i>Image (Exterior surface)</i>	<i>Image (Interior surface)</i>
1	LHR03	EA-511	rim	8.5	small globular jar		
2	LHR06	EA-511	rim	9	small globular jar		
3	LHR07	EA-511	rim	12.5	medium globular jar		x
4	LHR09	EA-520	rim	NA	jar - rim diam unknown		x
5	LHR10	EA-520	rim	26	large jar		
6	LHR11	EA-520	rim	NA	large jar		
7	LHR12	EA-520	body	NA	large perforated vessel		

8	LHR13	EA-520	rim	NA	jar - rim diam unknown		
9	LHR21	EA-520	rim	16	medium jar		
10	LHR25	EA-525	rim	12	small jar		
11	LHR26	EA-520	rim	16	medium jar		
12	LHR27	EA-520	rim	9	small necked jar		
13	LHR29	EA-522	base	NA	jar - rim diam unknown	x	x
14	LHR36	EA-553	body	NA	jar - rim diam unknown	x	x
15	LHR38	EA-553	body	NA	large perforated vessel	x	x
16	LHR40	EA-553	rim	18	large jar	x	x
17	LHR14*	EA-520	body	NA	perforated jar		x
18	LHR15*	EA-520	rim	22	large jar		














19	LHR16*	EA-520	terracotta cake				x
20	LHR17*	EA-520	body	NA	perforated jar		
21	LHR20*	EA-520	rim	28	large necked jar		
22	LHR22*	EA-524	body	NA	jar?		
23	LHR23*	EA-524	rim	10	small jar		
24	LHR24*	EA-520	rim	32	ledged jar		
25	LHR32*	x	rim	21	large jar	x	x
26	LHR33*	x	rim	40	dish	x	x

Table S.8: List of analysed samples from Lohari Ragho I with lipid concentrations <5 µg/g. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and δ¹³C values of the C_{18:0}, and C_{16:0} fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract.

S.No.	Sample ID	Rim/ Base/ Body	Vessel shape	Rim size (cm)	Chronolo gical period	Before, during or post- 4.2 ka	Lipid concentration (µg/g)	Lipid composition				P/S ratio (C _{18:0} - C _{16:0})	δ ¹³ C C _{16:0}	δ ¹³ C C _{18:0}	Δ ¹³ C (C _{18:0} - C _{16:0})
								FAs	UFAs	Br	Diacids				
1	LHR03	rim	small globular jar	8.5	EMH	Before	44.6	C12, C14-C18, C20; C16, C18	C16:1, C18:1, C22:1			0.8	-30.7	-30.7	0.1
2	LHR06	rim	small globular jar	9	EMH	Before	5.9	C12, C14, C16, C18; C16	C16:1, C18:1, C22:1			1.8			
3	LHR07	rim	medium globular jar	12.5	EMH	Before	34.6	C14-C18, C20, C22, C24; C16, C18	C16:1, C18:1, C22:1	C15Br, C17Br	Present	0.9	-28.3	-28.8	-0.5
4	LHR09	rim	jar - rim diam unknown	NA	LMH	Post- 4.2 ka	29.9	C12, C14-C18, C20, C22, C24; C16, C18	C16:1, C18:1, C22:1			0.8	-29.3	-29.9	-0.6
5	LHR10	rim	large jar	26	LMH	Post- 4.2 ka	214.7	C12-C24 (including C13, C15, C17, C19, C21, C23); C18, C16	C16:1, C18:1, C20:1, C22:1	C13Br, C15Br, C17Br, C19Br	Present (C7, C8, C9)	1.0	-14.2	-15.1	-0.9
6	LHR11	rim	large jar	NA	LMH	Post- 4.2 ka	24.3	C14-C18, C20, C22, C23, C24, C25, C26; C16	C16:1, C18:1, C20:1, C22:1	C17Br		1.2	-23.0	-24.3	-1.3
7	LHR12	body	large perforated vessel	NA	LMH	Post- 4.2 ka	16.4	C14-C18, C20, C22, C24, C26; C18	C16:1, C18:1, C20:1, C22:1	C15Br, C17Br		0.8	-30.2	-30.7	-0.5
8	LHR13	rim	jar - rim diam unknown	NA	LMH	Post- 4.2 ka	27.3	C14-C18, C20, C22, C24, C25, C26, C28; C16	C16:1, C18:1, C20:1, C22:1	C15Br, C17Br	Present	1.0	-24.9	-24.7	0.2

9	LHR21	rim	medium jar	16	LMH	Post-4.2 ka	9.0	C14, C16, C18, C20, C22; C16, C18	C18:1	1.0			
10	LHR25	rim	small jar	12	LMH	Post-4.2 ka	19.2	C16, C18, C20; C18	C18:1	0.7	-31.0	-31.2	-0.2
11	LHR26	rim	medium jar	16	LMH	Post-4.2 ka	21.1	C14-C18, C20, C22; C18	C18:1	0.7	-18.8	-19.2	-0.4
12	LHR27	rim	small necked jar	9	LMH	Post-4.2 ka	17.2	C16, C18, C20; C18	C16:1, C18:1, C22:1	0.7	-31.2	-31.3	0.0
13	LHR29	base	jar - rim diam unknown	NA	LMH	Post-4.2 ka	5.6	C16, C18; C16	C18:1	0.8			
14	LHR36	body	jar - rim diam unknown	NA	LMH	Post-4.2 ka	10.7	C14, C16-C18, C20, C22, C24; C18	C18:1, C22:1	1.0			
15	LHR38	body	large perforated vessel	NA	LMH	Post-4.2 ka	12.9	C14-C18, C20, C22, C24, C26, C28; C16	C18:1, C20:1, C22:1	1.0	-27.8	-27.7	0.0
16	LHR40	rim	large jar	18	LMH	Post-4.2 ka	22.0	C14-C18, C20, C22; C16	C16:1, C18:1, C22:1	1.0	-15.5	-17.2	-1.7

Table S.9: Details of all analysed vessels from Khanak. Vessel fragments marked with * had lipid concentrations lower than 5 µg/g and were excluded from analysis.

<i>S.No.</i>	<i>Sample No.</i>	<i>Trench/Context</i>	<i>Rim/Base/Body</i>	<i>Rim diameter</i>	<i>Vessel form</i>	<i>Image (Interior)</i>	<i>Image (Exterior)</i>
1	KNK01	A05-502	base	NA	jar?	x	
2	KNK02	A05-502	rim	5	small jar		













3	KNK11	A05-510	rim	NA	small jar		
4	KNK18	A05-510	base	NA	large jar		
5	KNK03*	A05-502	rim	13	bowl		
6	KNK04*	A05-502	rim	14	medium jar		
7	KNK05*	A05-502	rim	13.5	medium jar		
8	KNK06*	A05-507	body	NA	large jar		

Table S.10: List of analysed samples from Khanak with lipid concentrations <5 µg/g. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and $\delta^{13}\text{C}$ values of the $\text{C}_{18:0}$, and $\text{C}_{16:0}$ fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract.

S.No.	Sample ID	Rim/ Base/ Body	Vessel shape	Rim size (cm)	Chronological period	Before, during or post-4.2 ka	Lipid concentrat ion (µg/g)	Lipid composition				P/S ratio ($\text{C}_{16:0}/$ $\text{C}_{18:0}$)	$\delta^{13}\text{C}$ $\text{C}_{16:0}$	$\delta^{13}\text{C}$ $\text{C}_{18:0}$	$\Delta^{13}\text{C}$ ($\text{C}_{18:0}-$ $\text{C}_{16:0}$)
								FAs	UFAs	Br	Diacids				
1	KNK01	base	small jar	NA	LMH	During	18.2	C14-C22, C24; C16 , C18	C16:1, C18:1	C17Br		1.0	-18.5	-21.6	-3.0
2	KNK02	rim	small jar	5	LMH	During	131.0	C14-C18, C20, C22; C18	C16:1, C18:1	C15Br, C17Br	Present	1.2	-15.3	-16.0	-0.7
3	KNK11	rim	small jar	NA	EMH	Before	39.2	C14-C28 (including odd-chain FAs); C16	C16:1, C18:1; C20:1, C22:1	C15Br, C17Br	Present: C18	1.0	-28.0	-28.5	-0.5
4	KNK18	base	large jar	NA	EMH	Before	8.1	C14-C18, C20, C22; C16	C16:1, C18:1, C20:1, C22:1	C15Br, C17Br		1.4			

Table S.11: Details of all analysed vessels from Farmana. Vessel fragments marked with * had lipid concentrations lower than 5 µg/g and were excluded from analysis

<i>S.No.</i>	<i>Sample No.</i>	<i>Trench/Context</i>	<i>Rim/Base/Body</i>	<i>Rim diam</i>	<i>Vessel form</i>	<i>Image (Exterior surface)</i>	<i>Image (Interior surface)</i>
1	FRN04	3Y17-9023	neck	NA	small jar		
2	FRN09	1G7-9022 (Complex 3)	rim	14.5	medium jar		
3	FRN10	1G7-9022 (Complex 3)	rim	20	large jar		
4	FRN11	1G7-9022 (Complex 3)	body	NA	perforated vessel		
5	FRN13	1B3-8004 (Main Street)	rim	8.5	small jar		
6	FRN14	1G3-8007 (Outside Complex 4)	rim	19.5	large jar		
7	FRN15	1D5-8007 (Complex 3)	rim	9.5	small jar		

8	FRN16	1D5-8007 (Complex 3)	body	NA	perforated vessel		
9	FRN17	1D5-8007 (Complex 3)	body	NA	perforated vessel		
10	FRN18	1B3-8004 (Main Street)	rim	6	small ledged jar		
11	FRN19	1G3-8007 (Outside Complex 4)	rim	16	medium jar		
12	FRN20	1G3-8007 (Outside Complex 4)	rim	7	small jar		
13	FRN21	1E3-8005 (Complex 3)	rim	7	small jar		
14	FRN24	1E3-8005 (Complex 3)	rim	8	small jar		
15	FRN25	1B5-8002 (Complex 3)	rim	17	medium bowl		

16	FRN26	1C6-8003 (Complex 3)	body	NA	jar - rim diam unknown		
17	FRN34	1G3-8007 (Outside Complex 4)	rim	8	small jar		
18	FRN35	1E3-8005 (Complex 3)	rim	10	small jar		
19	FRN02*	1C8-09021 (Inside Complex 3)	body	NA	jar-rim diam unknown		
20	FRN08*	1G7-9022 (Complex 3)	rim	5.5	small jar		
21	FRN12*	1D5-8008 (Complex 3)	rim	21	large jar		
22	FRN22*	1E3-8005 (Complex 3)	rim	11	small jar		
23	FRN23*	1D3-8008 (Complex 3)	rim	8.5	small jar		

24	FRN27*	1D3-8008 (Complex 3)	body	NA	jar?
25	FRN28*	1G4-8005 (Lane No. 2)	body	NA	perforated
26	FRN29*	1G3-8007 (Outside Complex 4)	rim	20	bowl
27	FRN30*	1E3-8005 (Complex 3)	body	NA	jar?
28	FRN31*	1G7-9022 (Inside Complex 3)	rim	15.5	bowl
29	FRN32*	1D3-8008 (Complex 3)	body	NA	perforated vessel
30	FRN33*	1G4-8005 (Lane No. 2)	rim	8.5	small jar






















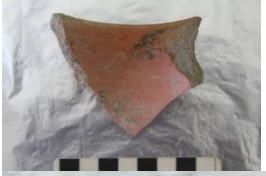








Table S.12: List of analysed samples from Farmana with lipid concentrations <5 µg/g. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and δ¹³C values of the C_{18:0}, and C_{16:0} fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract.

S.No	Sample ID	Rim/ Base/ Body	Vessel forme	Rim size (cm)	Chronol o gical period	Before , during or post-4.2 ka	Lipid concentration (µg/g)	Lipid composition				P/S ratio (C _{16:0} /C _{18:0})	δ ¹³ C C _{16:0}	δ ¹³ C C _{18:0}	Δ ¹³ C (C _{18:0} -C _{16:0})
								FAs	UFAs	Br	Diacids				
1	FRN04	neck	small jar	NA	EMH	Before	14.0	C14-C18; C16	unmethylated C18:1	C15Br, C17Br		1.7	-16.0	-19.8	-3.8
2	FRN09	rim	medium jar	14.5	EMH	Before	41.4	C12, C14-C18, C20, C22; C16	C16:1, C18:1, C20:1	C15Br, C17Br		1.0	-19.3	-20.2	-0.9
3	FRN10	rim	large jar	20	EMH	Before	7.9	C14-C18; C16	C18:1			1.8			
4	FRN11	body	perforated vessel	NA	EMH	Before	23.6	C12, C14-C18, C20; C16	C16:1, C18:1, C22:1			1.2	-27.0	-30.0	-3.0
5	FRN13	rim	small jar	8.5	EMH	Before	12.3	C12, C14-C18, C20, C22; C24 C16	C16:1, C18:1	C17Br		1.1	-28.2	-27.9	0.3
6	FRN14	rim	large jar	19.5	EMH	Before	17.6	C12, C14-C18, C20, C22, C24; C16	C16:1, C18:1; unmethylated C18:1, C20:1, C22:1	C17Br		1.1	-26.2	-25.9	0.3
7	FRN15	rim	small jar	9.5	EMH	Before	6.1	C14-C18; C16	C16:1, C18:1	C17Br		1.4			
8	FRN16	body	perforated vessel	NA	EMH	Before	9.8	C12, C14-C18; C16	C16:1, C18:1, unmethylated C18:1		Present: C14	2.3			
9	FRN17	body	perforated vessel	NA	EMH	Before	10.4	C12-C18; C16	C18:1		Present: C14	2.8			

10	FRN18	rim	small ledged jar	6	EMH	Before	45.6	C12-C18, C20, C22, C24; C18	C16:1, C18:1, C20:1	C15Br, C17Br	Present: C10	1.2	-20.2	-23.0	-2.8
11	FRN19	rim	medium jar	16	EMH	Before	5.3	C14, C16, C18; C16	C18:1			2.6			
12	FRN20	rim	small jar	7	EMH	Before	6.9	C15-C18; C16	C16:1, C18:1	C17Br	Present: C14	1.6			
13	FRN21	rim	small jar	7	EMH	Before	8.7	C14-C18, C20, C22, C24; C16	C16:1, C18:1			1.2			
14	FRN24	rim	small jar	8	EMH	Before	7.1	C14-C18, C20; C16	C16:1, C18:1			1.3			
15	FRN25	rim	medium bowl	17	EMH	Before	9.0	C14-C18, C20, C22, C24; C16	C16:1, C18:1, C18:1, C20:1			1.2			
16	FRN26	body	jar - rim diam unknown	NA	EMH	Before	9.7	C14-C18, C20; C16	C16:1, C18:1, C22:1	C17Br		3.5	-25.3	-26.4	-1.1
17	FRN34	rim	small jar	8	EMH	Before	19.2	C14-C18; C16	C16:1, C18:1			1.2			
18	FRN35	rim	small jar	10	EMH	Before	6.1	C14-C18; C16	C16:1, C18:1			1.7			

Table S.13: Details of all analysed vessels from Rakhigarhi. Vessel fragments marked with * had lipid concentrations lower than 5 µg/g and were excluded from analysis

<i>S.No.</i>	<i>Sample No.</i>	<i>Trench-Context</i>	<i>Rim/Base/Body</i>	<i>Rim diam</i>	<i>Vessel type</i>	<i>Image (Interior)</i>	<i>Image (Exterior)</i>
1	RGR01	4.1E-140031	rim	8	small ledged jar		
2	RGR02	4.1E-140030	rim	5	small ledged jar		
3	RGR03	4.1E-140025	rim	8	small ledged jar		
4	RGR04	4.1E-140031	rim	12	small jar		
5	RGR05	4.1E-140035	rim	16	medium jar		
6	RGR06	4.1F-15034	rim	7	small jar		
7	RGR15	4.1B-14011	body	NA	perforated vessel		

8	RGR16	4.1B-14011	rim		19	large dish		
9	RGR17	4.1B-14002	rim		11	small jar		
10	RGR20	4.1B-14003	rim		5	very small jar		
11	RGR21	4.1F-14038	rim		16	medium jar		
12	RGR22	4.1F-14038	body	NA		perforated vessel		
13	RGR23	4.1F-14038	body	NA		perforated vessel		
14	RGR24	4.1F-14038	rim		10	small necked jar		

15	RGR25	4.1F-14049	rim		13	medium jar
16	RGR27	4.1F-14038	rim		8	small jar
17	RGR29	4.1E-14004	neck	NA		medium jar
18	RGR30	4.1E-14005	body	NA		large jar?
19	RGR07*	4.1F-15034	rim		12	dish
20	RGR08*	4.1F-15034	rim	NA		ledged jar
21	RGR09*	4.1F-15034	rim		12.5	jar
22	RGR010*	4.1F-15034	rim		10	ledged jar



23	RGR11*	4.1F-15034	rim		11	necked jar
24	RGR12*	4.1F-15034	rim		12	jar
25	RGR13*	4.1F-15034	rim		8	jar
26	RGR14*	4.1B-14003	rim		15	jar
27	RGR18*	4.1B-14002	rim		9	jar
28	RGR19*	4.1B-14002	body	NA		perforated vessel
29	RGR26*	4.1B-14011	body	NA		perforated vessel



30

RGR28*

4.1F-14049

rim

6 small jar



Table S.14: List of analysed samples from Rakhigarhi with lipid concentrations <5 µg/g. Details of the vessel fragments, chronological period, lipid concentration, lipid composition, P/S ratio and δ¹³C values of the C_{18:0}, and C_{16:0} fatty acids for every sample are provided. FAs: saturated fatty acids, UFAs: unsaturated fatty acids, Br: branched-chain fatty acids, Diacids: dicarboxylic acids. Fatty acids in bold reflect the compound with the highest abundance within the lipid abstract.

S.No.	Sample ID	Rim/ Base/ Body	Vessel form	Rim size (cm)	Chronological period	Before, during or post-4.2 ka	Lipid concentration (µg/g)	Lipid composition				P/S ratio (C _{18:0} -C _{16:0})	δ ¹³ C C _{16:0}	δ ¹³ C C _{18:0}	Δ ¹³ C (C _{18:0} -C _{16:0})
								FAs	UFAs	Br	Diacids				
1	RGR01	rim	small ledged jar	8	EMH	Before	21.9	C14-C18, C24; C18	C16:1, C18:1			2.0	-26.9	-26.7	0.1
2	RGR02	rim	small ledged jar	8	EMH	Before	16.6	C14-C18, C20, C22; C16	C16:1, C18:1	C15Br, C17Br	Present: C9	1.5	-26.0	-26.8	-0.8
3	RGR03	rim	small ledged jar	8	EMH	Before	18.9	C12, C14-C18, C20, C22, C24; C16	C16:1, C18:1	C17Br		1.3	-24.7	-21.2	3.4
4	RGR04	rim	small jar	9	EMH	Before	11.6	C14, C15, C16, C18; C16	C18:1		Present: C9	2.2			
5	RGR05	rim	large jar	19.5	EMH	Before	8.5	C12, C14, C16, C18; C16	C18:1			3.5			
6	RGR06	rim	small jar	7	EMH	Before	23.6	C12, C14-C16, C18, C20, C22, C23, C24, C25, C26; C16	C16:1, C18:1, C22:1			1.0			
7	RGR15	body	large perforated vessel	NA	EMH	Before	5.1	C14-C18; C16	C18:1, C22:1			2.9			
8	RGR16	rim	large dish	19	EMH	Before	8.2	C14-C18, C20, C22, C24; C16	C16:1, C18:1			1.5			
9	RGR017	rim	small jar	11	EMH	Before	9.5	C14-C18; C16	C18:1	C17Br		1.2	-25.8	-25.3	0.5

10	RGR020	rim	very small jar	5	EMH	Before	36.7	C14-C26 (including all odd-chain fatty acids); C16	C16:1, C18:1	C15Br, C17Br	Present: C9	1.0	-16.0	-19.5	-3.4
11	RGR021	rim	medium jar	16	EMH	Before	17.1	C14-C18; C20, C22, C24; C16	C16:1, C18:1		Present: C9	1.2			
12	RGR022	body	perforated vessel	NA	EMH	Before	6.6	C14, C15, C16, C18; C16	C18:1			1.0			
13	RGR023	body	perforated vessel	NA	EMH	Before	11.8	C16, C18; C16				2.3			
14	RGR024	rim	small necked jar	10	EMH	Before	48.8	C14-C26 (including odd-chain fatty acids); C22	C16:1, C18:1,			0.8	-28.6	-26.5	2.2
15	RGR025	rim	medium jar	13	EMH	Before	7.2	C14, C16, C18, C20, C22, C24, C26; C16	C16:1, C18:1			1.2			
16	RGR027	rim	small jar	8	EMH	Before	11.7	C14-C18, C20, C22, C24; C16, C18	C16:1, C18:, C20:1			1.1			
17	RGR029	neck	medium jar	NA	EMH	Before	12.6	C14-C18, C20, C22, C24; C16	C16:1, C18:, C20:1			1.2	-28.9	-29.0	-0.1
18	RGR030	body	large jar	NA	EMH	Before	5.9	C14-C18, C20, C22, C24; C18	C16:1, C18:1			1.0			

Table S.15: Details and lipid concentrations and composition of vessels excluded from analysis.

<i>Sample ID</i>	<i>Chronology details</i>	<i>Rim/base/body</i>	<i>Rim diam (cm)</i>	<i>Vessel form</i>	<i>Lipid concentration (µg/g)</i>
ALM121-385	LH	body	NA	Jar?	3.1
FRN02	EMH	body	NA	NA	1.7
FRN08	EMH	rim	5.5	Small jar	4.1
FRN12	EMH	rim	21	Large jar	4.2
FRN22	EMH	rim	11	Small jar	2.8
FRN23	EMH	rim	7.5	Small jar	3.8
FRN27	EMH	body	NA	Jar?	1.9
FRN28	EMH	body	NA	Perforated	2.7
FRN29	EMH	rim	20	Big bowl	2.6
FRN30	EMH	body	NA	Jar?	4.9
FRN31	EMH	rim	15.5	Medium bowl	0.2
FRN32	EMH	body	NA	Perforated	3.1
FRN33	EMH	rim	8.5	Small jar	2.4
KNK03	LMH	rim	13	Medium bowl	1.0

KNK04	EMH	rim	14	Medium jar	1.2
KNK05	EMH	rim	13.5	Medium jar	1.3
KNK06	EMH	body	NA	Large jar	3.8
KNK16	EH?	rim	19	Large jar	0.8
LHR08	LMH	terracotta cake	NA	NA	1.3
LHR14	LMH	body	NA	Perforated	0.8
LHR15	LMH	rim	22	Large jar	1.6
LHR16	LMH	terracotta cake	NA	NA	0.8
LHR17	LMH	body	NA	Perforated	0.7
LHR20	LMH	rim	28	Large necked jar	0.8
LHR22	LMH	rim	NA	Jar?	2.5
LHR23	LMH	rim	10	Small jar	1.0
LHR24	LMH	rim	32	Large ledged jar	0.4
LHR32	EMH	rim	21	Large jar	2.7
LHR33	EMH	rim	40	Large dish	1.1
MSD221	LMH	base	NA	Jar?	3.7

MSD258	LMH	rim	15	Medium jar	4.6
MSD1387	LMH	rim	29	Large jar/vat	1.8
MSD1562A	LMH	rim	18	Large jar	3.1
MSD1598	LMH	rim	35	Large jar/vat	2.9
MSD1600	LMH	rim	18	Large jar	1.2
MSD1710	EMH	rim	15	Perforated bowl	2.9
MSD3410	LH	rim	NA	ledged jar	4.4
RGR07	EMH	rim	12	Small dish	5.0
RGR08	EMH	rim	NA	ledged jar	3.3
RGR09	EMH	rim	12.5	Small jar	3.3
RGR10	EMH	rim	10	Small ledged jar	1.0
RGR11	EMH	rim	11	Small necked jar	3.2
RGR12	EMH	rim	12	Small jar	4.9
RGR13	EMH	rim	8	Small jar	1.1
RGR14	EMH	rim	15	Medium jar	3.4
RGR18	EMH	rim	9	Small jar	4.2

RGR19	EMH	rim	NA	Perforated	1.6
RGR26	EMH	body	NA	Perforated	2.7
RGR28	EMH	rim	6	Small jar	4.0