

## Supporting Information

**Title:** Formation and weathering assessment of oil-suspended particulate matter aggregates through a laboratory investigation

Suneel, V., Sathish Kumar, S., Balaji, R and P. Vethamony

**Table S1. Experimental setup details**

Crude oil type	ID	OS R	Mixing period	Oil quantity (mg/L)	Sediment quantity (mg/L)	Addition of Sediments (mg/L)
Arabian Light	AL	1:1	05hrs.	200	200	-Nil-
				200	400	
				400	200	
		2:1	10hrs.	200	200	-Nil-
				200	400	
				400	200	
	1:2	*10hrs.	200	200	200	
			200	400		
			400	200		
	2:2	**20hrs.	200	200	200	
			200	400		
			400	200		
Kuwait	KW	1:1	05hrs.	200	200	-Nil-
				200	400	
				400	200	
		2:1	10hrs.	200	200	-Nil-
				200	400	
				400	200	
	1:2	*10hrs.	200	200	200	
			200	400		
			400	200		
	2:2	**20hrs.	200	200	200	
			200	400		
			400	200		
Murban	MB	1:1	5hrs.	200	200	-Nil-
				200	400	
				400	200	
		2:1	10hrs.	200	200	-Nil-
				200	400	
				400	200	
	1:2	*10hrs.	200	200	200	
			200	400		
			400	200		
	2:2	**20hrs.	200	200	200	
			200	400		
			400	200		

\*10hrs: \*5 hrs mixing + 200mg/L of sediment + 5 hrs mixing

\*\*20hrs: \*\*10 hrs mixing + 200mg/L of sediment + 10 hrs mixing

**Table S2. Compounds of PAH and its abbreviations**

Compounds of PAH	Abbreviation	Rings	Carcinogenic group*
Naphtalene	NA	2	2B
Acenaphtylene	ACE	3	N/A
Acenaphtene	AC	3	3
Fluorene	FL	3	3
Phenanthrene	PH	3	3
Anthracene	AN	3	3
1Methyl-Anthracene	1MA	3	N/A
Fluoranthene	FLU	4	3
Pyrene	PY	4	3
1 Methyl_Fluoranthene	1MF	4	
Benzo(a)_Anthracene	BaA	4	2B
Chrysene	CH	4	2B
Benzo(k)_Fluoranthene	BkF	5	2B
Benzo(a)_Pyrene	BaP	5	1
Indeno(1,2,3,c,d)_Pyrene	IPY	6	2B
Dibenzo_(a,b)_Anthracene	DAN	5	2A
Benzo_(g,h,i)_Perylene	BP	6	3
3 Methylphenanthrene	3MP	3	N/A
2 Methylphenanthrene	2MP	3	N/A
9 Methylphenanthrene	9MP	3	N/A
1 Methylphenanthrene	1MP	3	N/A
Methyl_Pyrene-1	1MPY	4	N/A
Methyl_Pyrene-2	2MPY	4	N/A
Methyl_Pyrene-3	3MPY	4	N/A
Methyl_Pyrene-4	4MPY	4	N/A
Methyl_Pyrene-5	5MPY	4	N/A
Methyl_Chrysene-1	1MCH	4	N/A
Methyl_Chrysene-2	2MCH	4	N/A
Methyl_Chrysene-3	3MCH	4	N/A
Methyl_Chrysene-4	4MCH	4	N/A
Methyl_Chrysene-5	5MCH	4	N/A
Methyl_Chrysene-6	6MCH	4	N/A

\*International Agency for Research on Cancer, IARC(2010) . Group 1 carcinogenic to humans, Group 2A probably carcinogenic to humans, Group 2B possibly carcinogenic to humans, Group 3 not classifiable as to its carcinogenic to humans

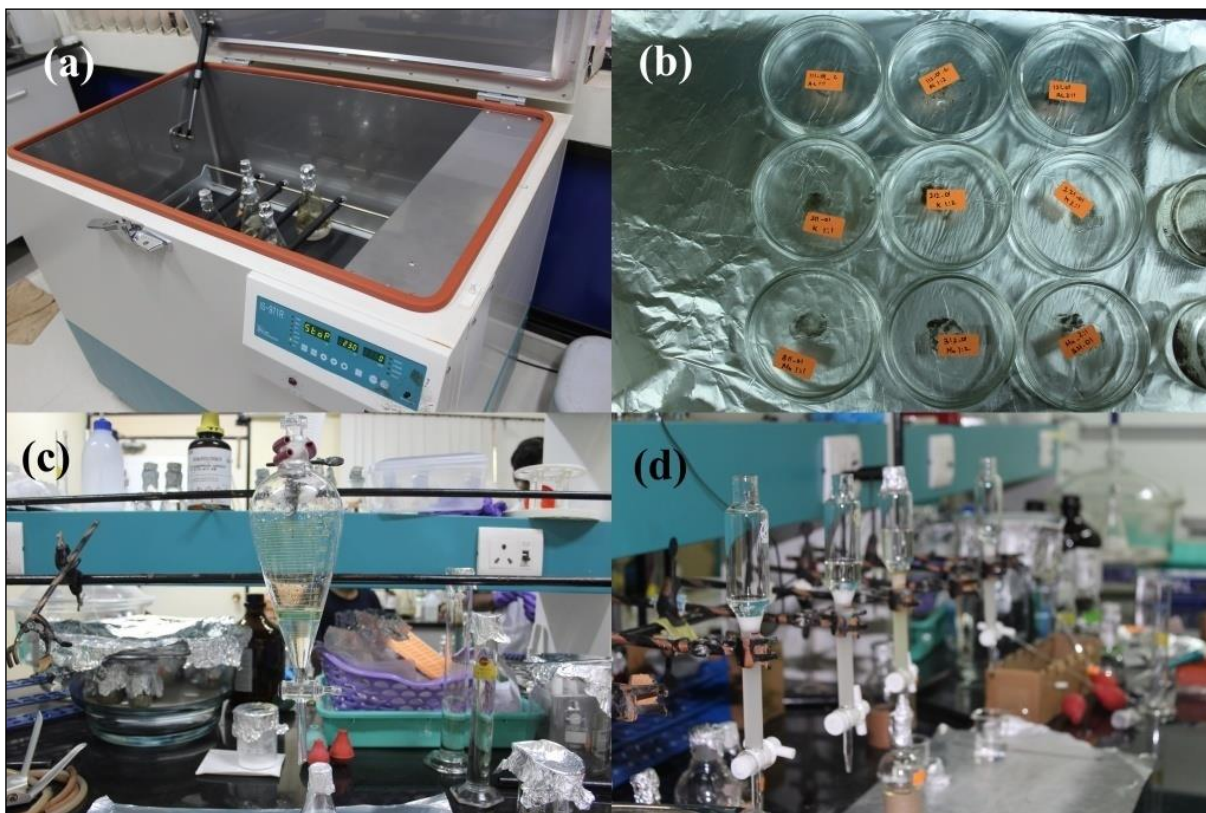


Figure S1(a) Controlled reciprocating shaker with conical flask (b) OSAs in the petri dish for microscopic analysis (c) oil, sediment separation using separatory funnel and (d) column chromatographic fractionation of Aliphatic and Aromatic compounds from OSAs

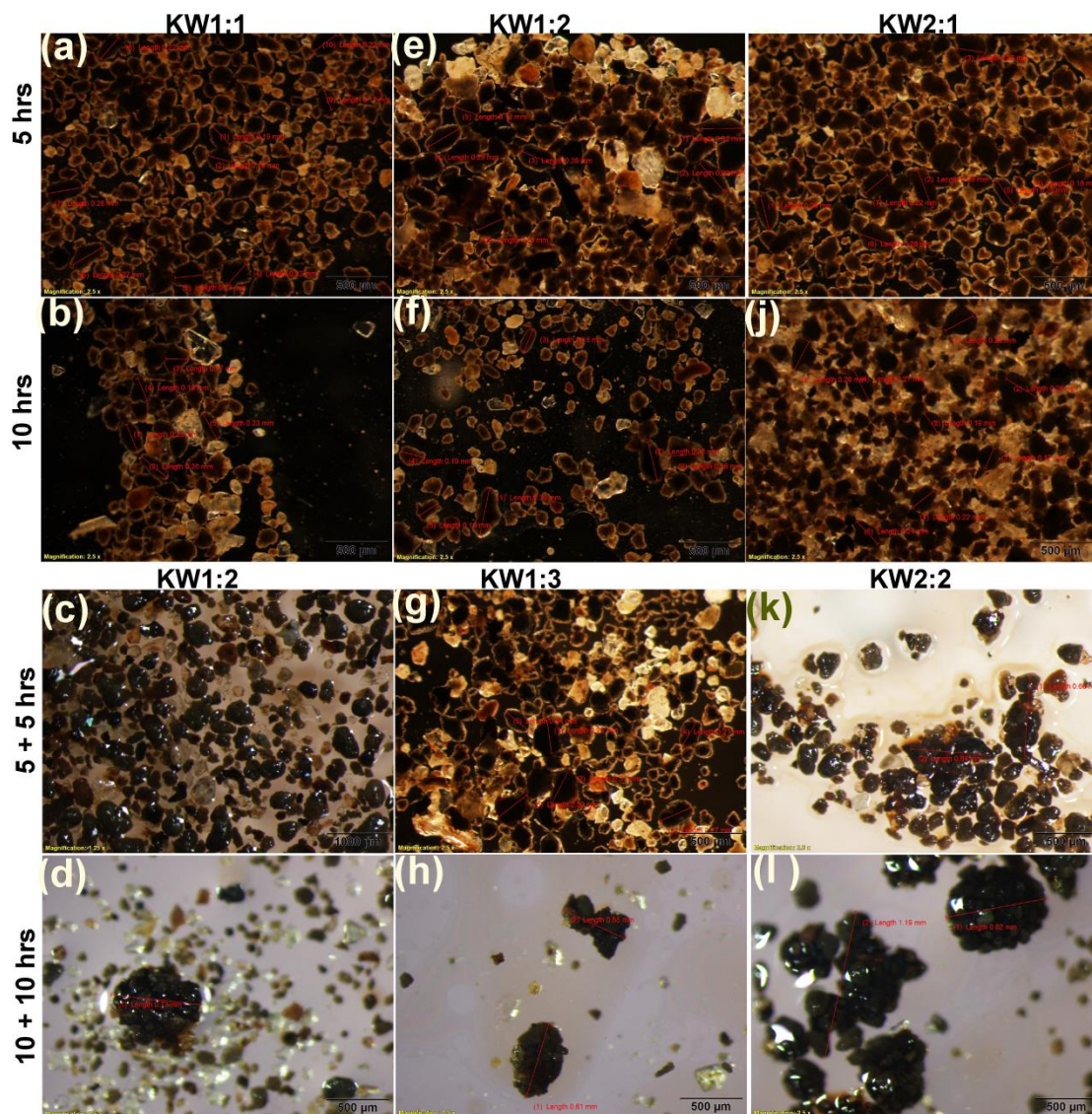


Figure S2. OSAs of KW crude oil under different mixing periods with different OSR

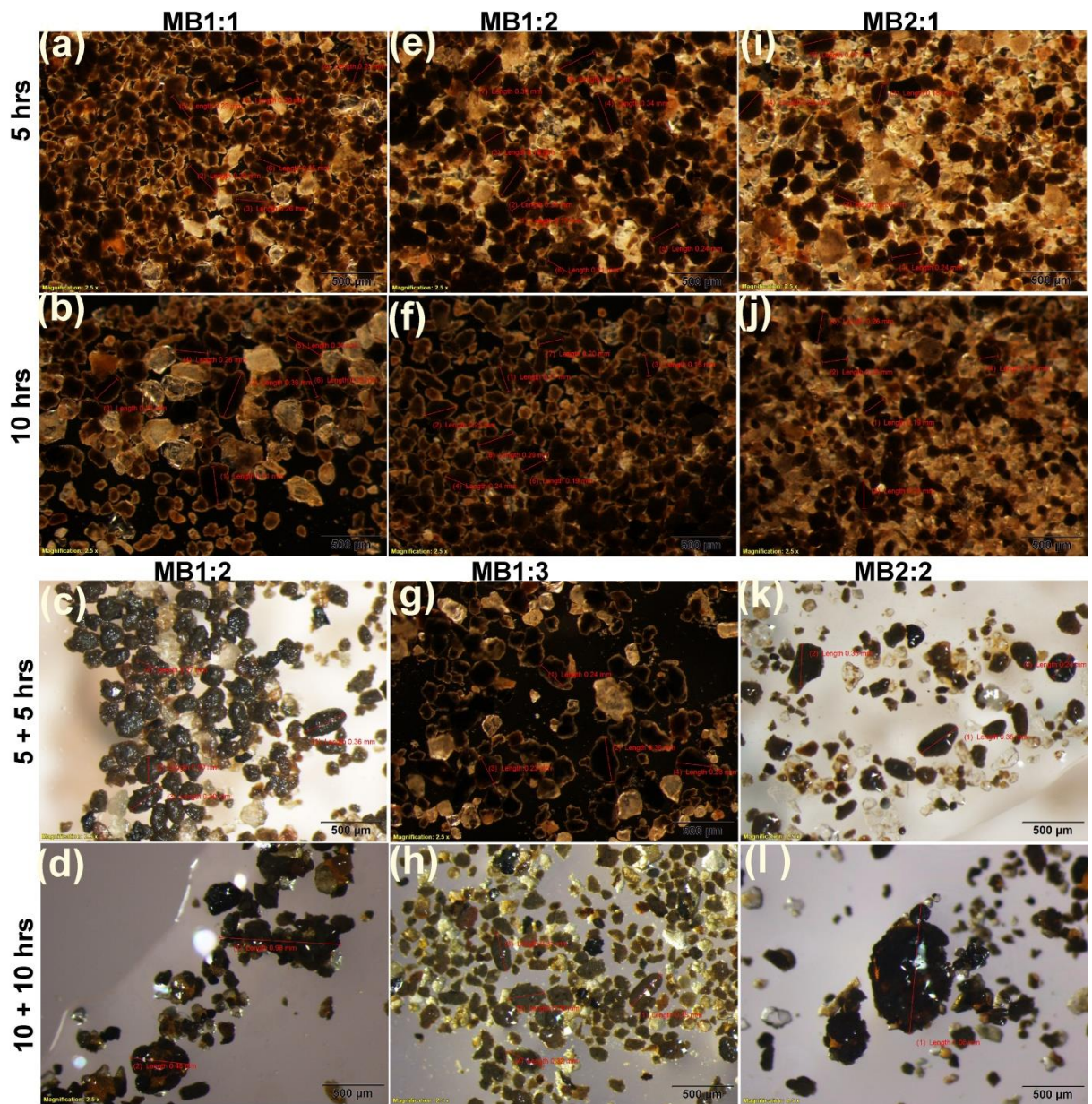


Figure S3. OSAs of MB crude oil under different mixing periods with different OSR