

4

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2

1

Ardeshirkalali9@gmail.com

SDS

(SDS)

GC/MS

4

[1].

Usepa Biowise

[2].

[3].

()

[4].

()

()

[5,6].

()

pH

()

1
2
3
4

() ()
 GS/MS [7].
 14 weathering [7].
 2
 87 92

GS/MS
 Weathering
 1
 Urum et al (2003,2004)
 50

(2)

()	
37.7	() API
0.084	() 15
0.084	() 20
0.036	() 50
-9	
0.023	

(1)

22	72	6	
1.7			
39.5			
0.1			
7.43			pH
0.54			

20 Urum et al (2003,2004)
 [7]. 200 20 cm³ 20
 n 10 cm³ 45 cm³ n
 400 n 5
) 10 cm³ HACH DR/2000
 n (n
 n 50 cm³ GC/MS 3000 rpm 20 50 cm³
 [9 8]. Urum et al

VG Quatro Tandem Mass Spectrometer GC/MS
 1.5 cm³/min 40-500 amu 70 ev
 55 c 2 55 c 0.25 mm HP5 fused Silica 30
 40 300 c 5 c/min
 [7]. n

Quillaja

%97

SDS

Sigma Chemical

%10

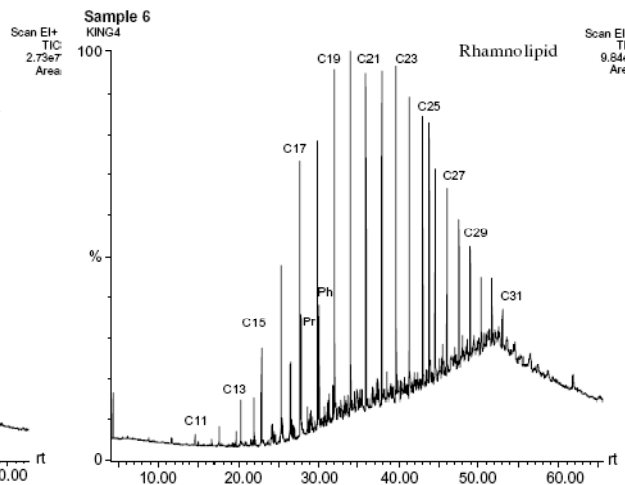
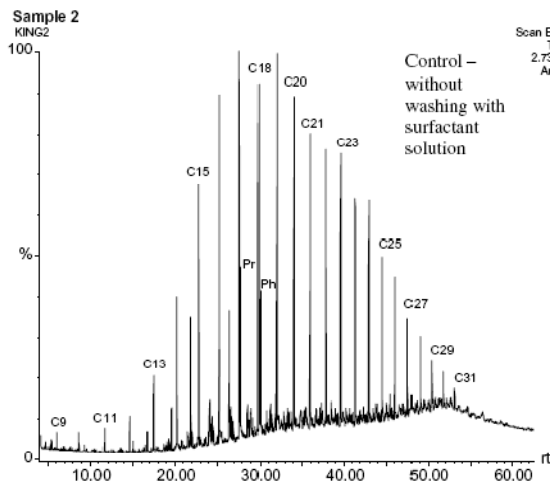
[7].

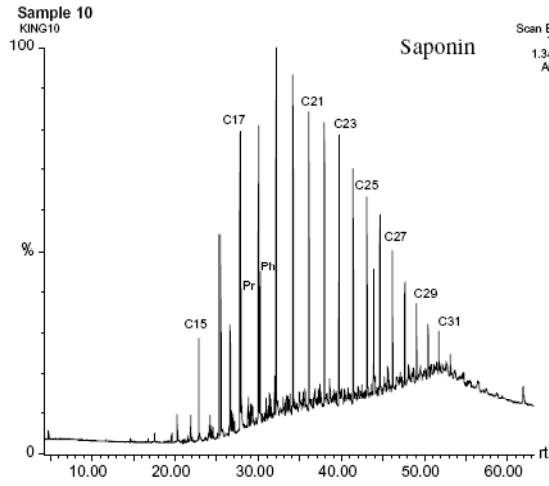
Fluka

(3)

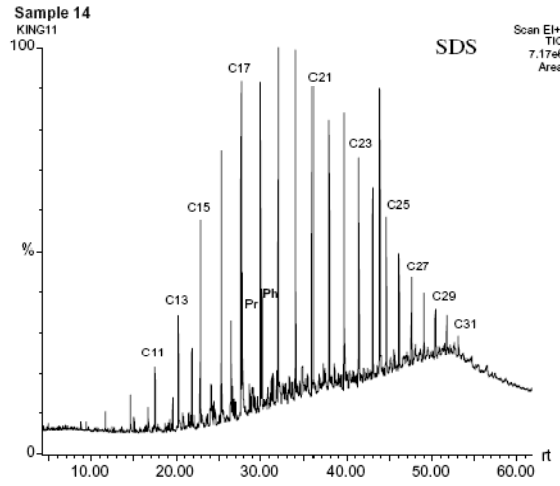
	(mN/m)	(mN/m)	CMC (mass%)	
75	4.5	28	0.02	
75	6	39	0.1	
33	7	35	0.2	

SDS weathering (%44) weathering (%27) (%46)
 %50 () %0.1 20 cm³
 GC
 [10 7].
 GC
 n
 () SDS 1 GC
 n
 Skidar & Irvine (1998) ()
 (USEPA,1999).
 n Zhang et al (2001) Somasundaran et al (1997)
 C₁₈ C₁₀ 1 GC
 [12 11 7]. SDS





SDS



GC (1)

GC/MS

GC/MS n
C₃₅ C₁₀
184, 170, 156, 142, 128,

240, 226, 221, 198, 184 m/z

(1)

234, 220, 206, 192, 178 m/z

m/z

4

(4)

a/b *100	(b)	(a)	
5.3	2662453	139797	
10.2	996600	101542	
5.2	1306917	67894	
13.5	993251	133566	SDS

()

a/b*100=5.25

(b)

(a)

a/b < 5.25 :1

a/b > 5.25 :2

4

SDS

SDS

SDS

[7].

SDS

C₂₅

n

1

n

n

SDS

n

C₁₅

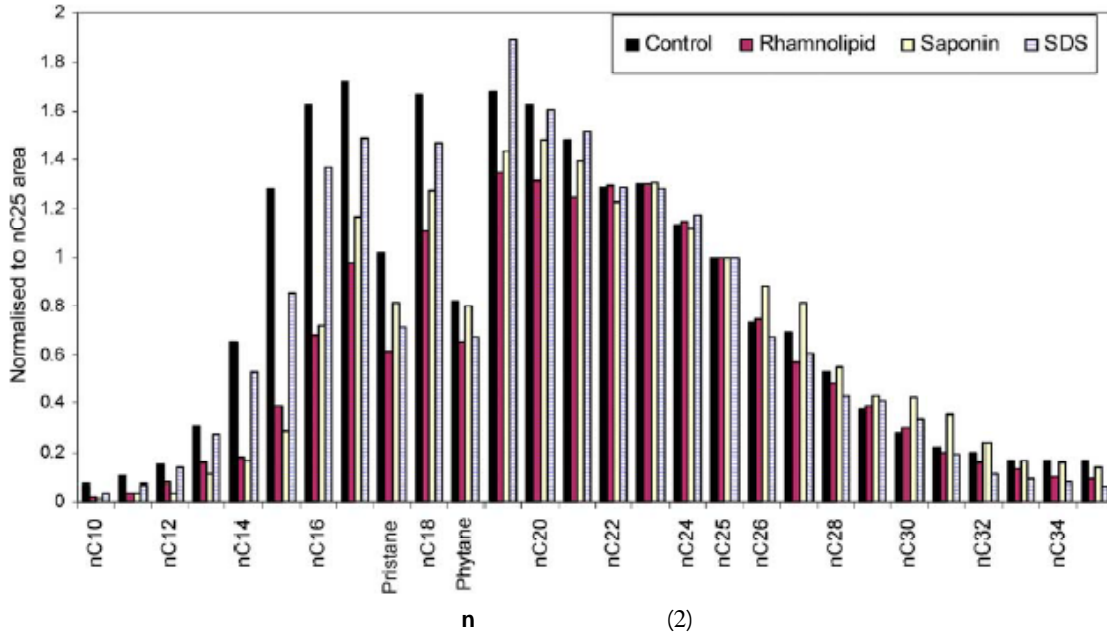
2

SDS

n

C₂₁ C₁₆
C₂₂

[7].



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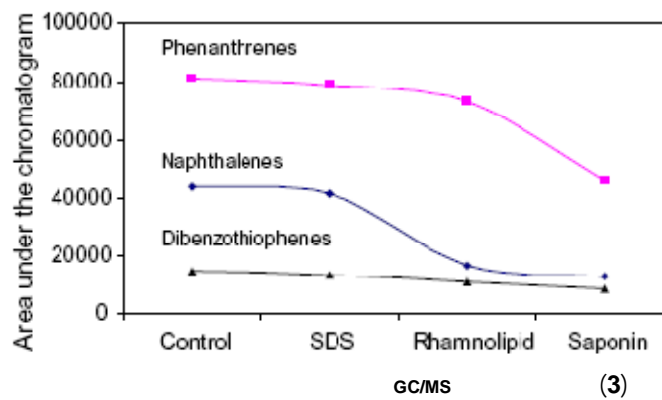
GC/MS

3

()

[9 8].

SDS



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SDS

133566 101542 67894

SDS

SDS

993251 996600 1306917

SDS

2.7

SDS

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