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29, 2001; 20, 2001; 21, 2001

Abstract

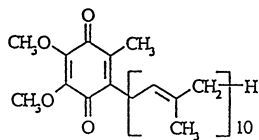
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Keywords: (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100)

1. Introduction

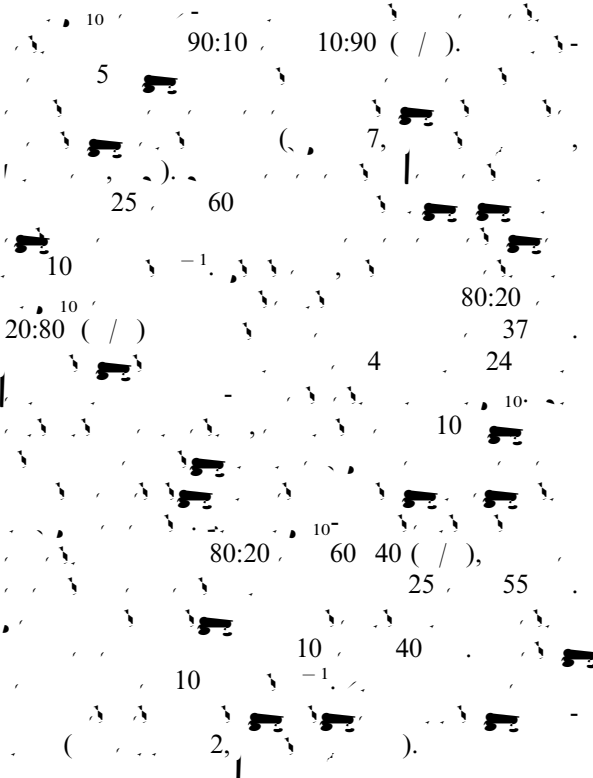
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(Nazzal et al., 1992).

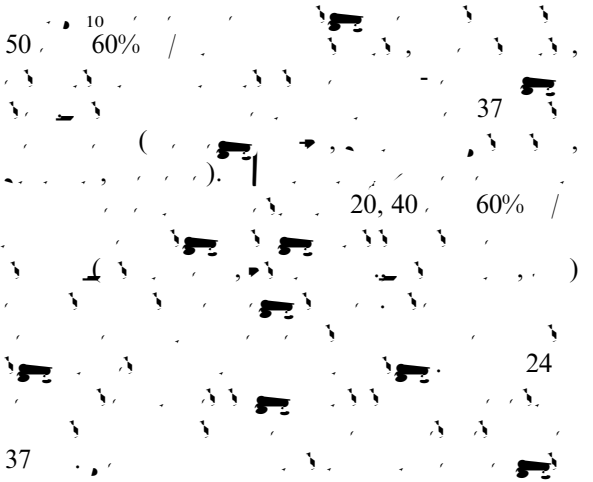


2.2. Methods

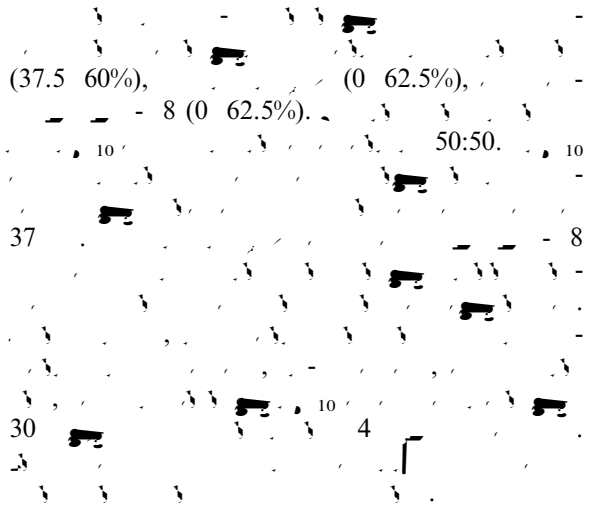
2.2.1. Differential scanning calorimetry (DSC) of CoQ₁₀-menthol and CoQ₁₀-essential oil binary systems.



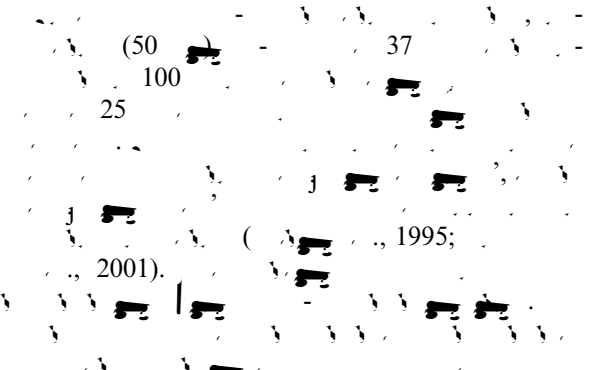
2.2.2. Determination of CoQ₁₀ melting time



2.2.3. Formulation of the self-emulsified systems



2.2.4. Visual observations



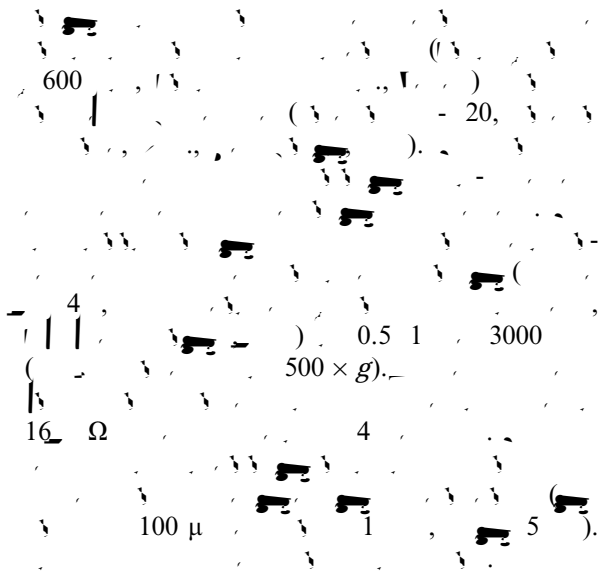
2.2.5. Emulsion droplet size analysis and turbidity measurements



2.2.5.1. Droplet size analysis.



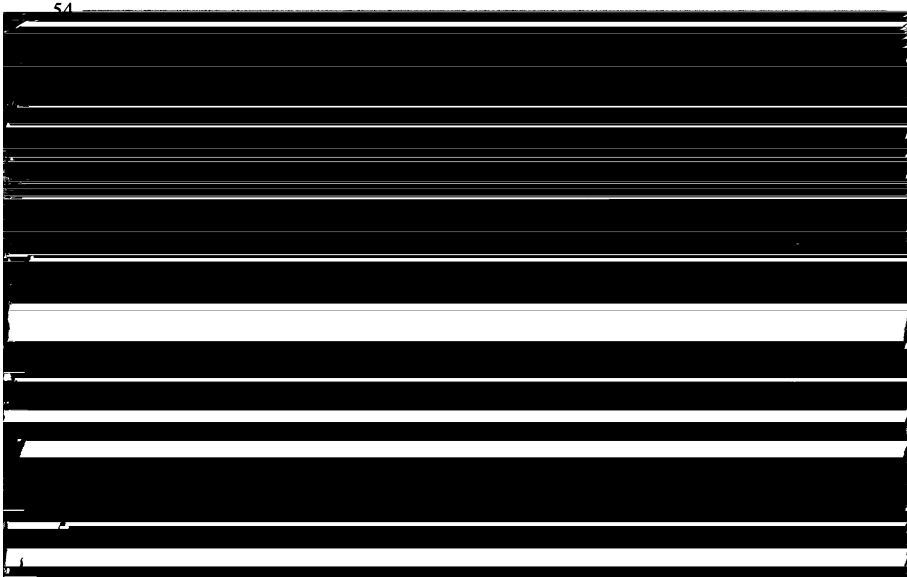
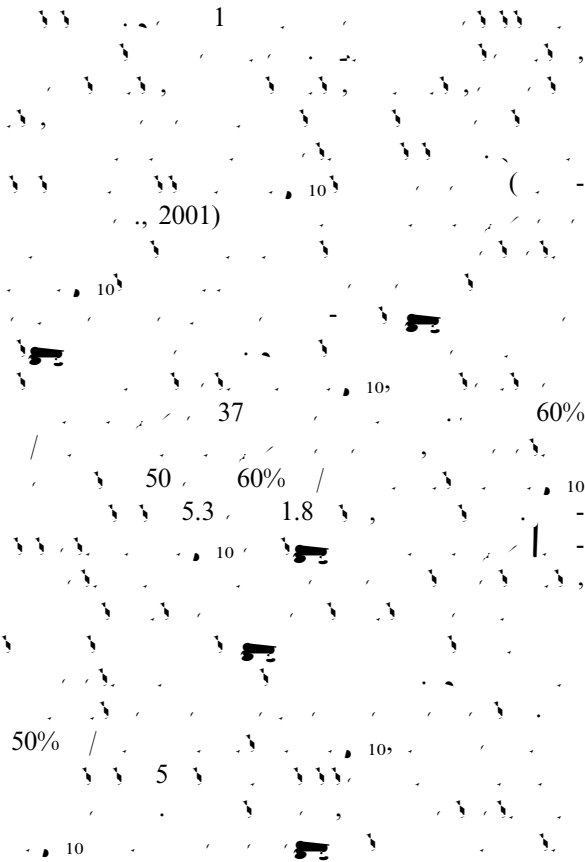
6 (286. (6 (286.)087.)-7()-286.)-286.9. 7) 0-1.2 0. .



2.2.



450 (, 1998).



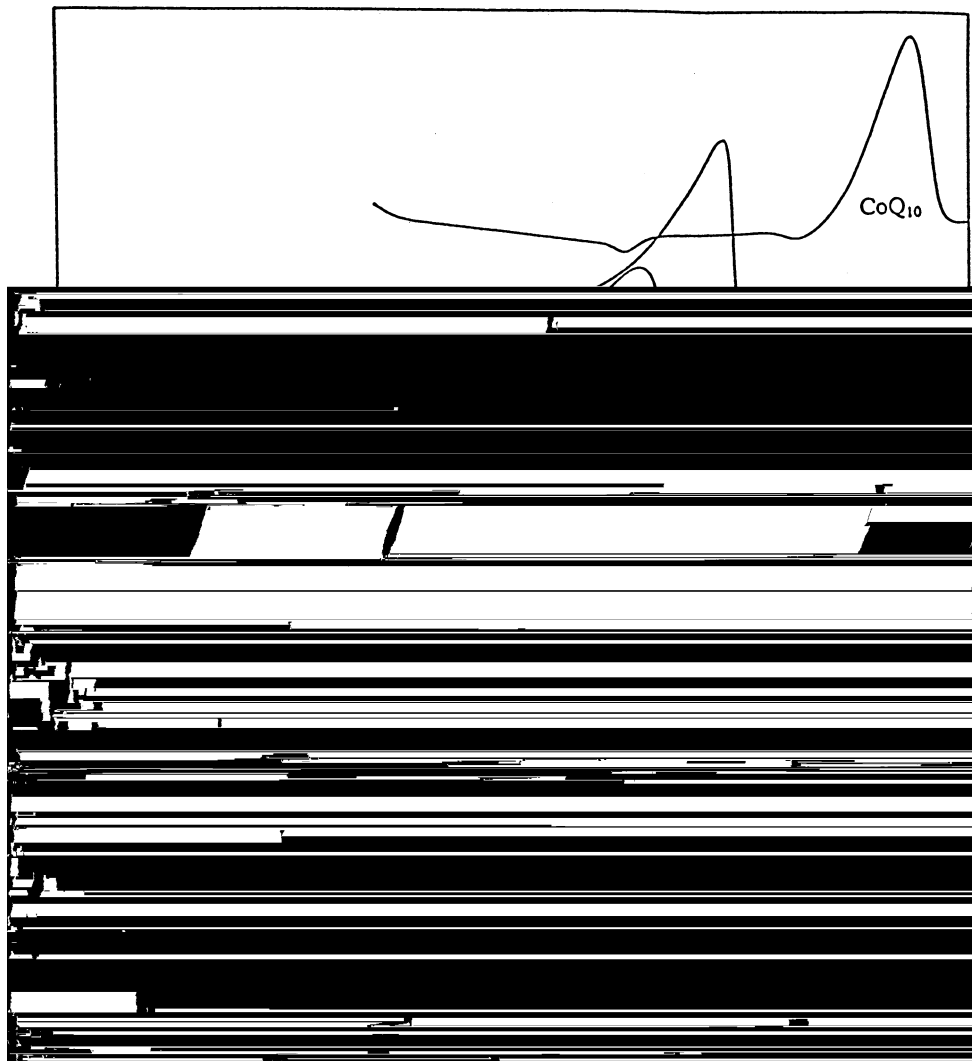


Fig. 4. HPLC chromatogram of CoQ10.

37.5%

1,

10

63%

(, 1975).

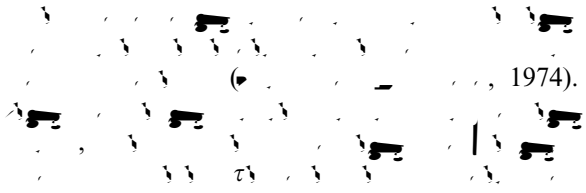
3.4. Droplet size analysis and turbidity measurements

(, 1997).

No.	Dose (mg)		Dose (μg)		Dose (μg)		Dose (μg)		Dose (μg)		
	10	20	0.1	0.25	0.5	0.75	0.9	0.1	0.25	0.5	
1	18.8	18.8	56.3	6.3	2.817	0.270	3.179	3.014	2.806	2.619	2.468
2	18.8	18.8	50.0	12.5	0.402	0.277	0.845	0.572	0.323	0.117	0.110
3	18.8	18.8	43.8	18.8	0.121	0.015	0.142	0.130	0.119	0.100	0.101
4	18.8	18.8	37.5	25.0	0.112	0.037	0.165	0.135	0.106	0.084	0.070
5	18.8	18.8	31.3	31.3	0.090	0.012	0.107	0.099	0.089	0.081	0.045
6	18.8	18.8	25.0	37.5	0.113	0.017	0.137	0.125	0.112	0.100	0.092
7	18.8	18.8	18.8	43.8	<0.040						
8	20.0	20.0	53.3	6.7	0.845	0.308	1.287	1.027	0.786	0.607	0.499
9	20.0	20.0	46.7	13.3	0.725	0.213	1.031	0.862	0.693	0.558	0.472
10	20.0	20.0	40.0	20.0	0.121	0.048	0.170	0.141	0.110	0.083	0.067
11	20.0	20.0	33.3	26.7	0.089	0.026	0.107	0.098	0.089	0.081	0.074
12	20.0	20.0	26.7	33.3							
13	20.0	20.0	20.0								

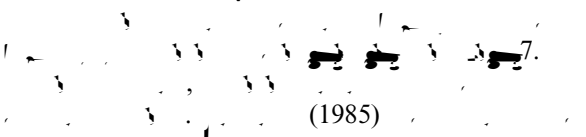
0.06781735 0, 20.037.5 0.02.995 0, 20.0

0.10158.8(3.179)-30002.8(0.862)-3292.4(0.119)-3101.3(0.084), 10-5.024 0, 7130.1125



$$\tau = Kw^2$$

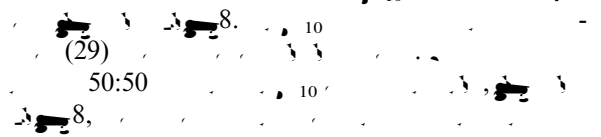
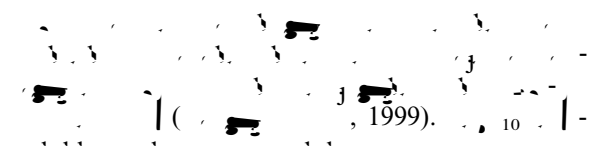
K , v , n , (1974; 1985).



(1985)

0, 1, (1998).

3.5. Fourier transform-infrared spectroscopy (FT-IR)



(29)

50:50

8,

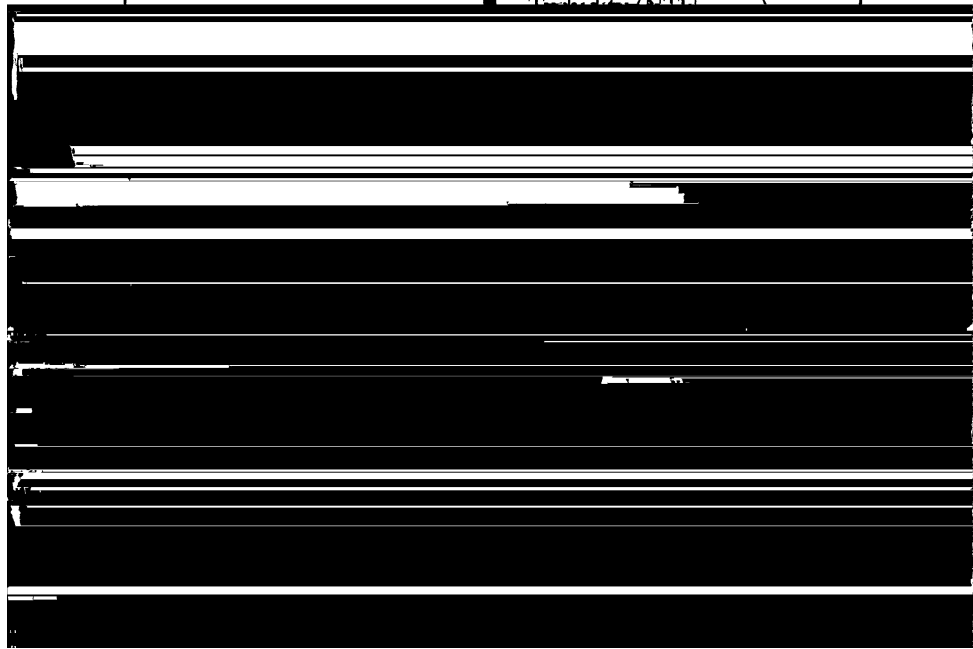


Fig. 7. Relationship between the thickness of the membrane (τ) and the square of the diffusion coefficient (Kw^2) for a 50:50 ratio. Fig. 8. Relationship between the thickness of the membrane (τ) and the square of the diffusion coefficient (Kw^2) for a 50:50 ratio. Fig. 9. Relationship between the thickness of the membrane (τ) and the square of the diffusion coefficient (Kw^2) for a 50:50 ratio. Fig. 10. Relationship between the thickness of the membrane (τ) and the square of the diffusion coefficient (Kw^2) for a 50:50 ratio. Fig. 11. Relationship between the thickness of the membrane (τ) and the square of the diffusion coefficient (Kw^2) for a 50:50 ratio. Fig. 12. Relationship between the thickness of the membrane (τ) and the square of the diffusion coefficient (Kw^2) for a 50:50 ratio.

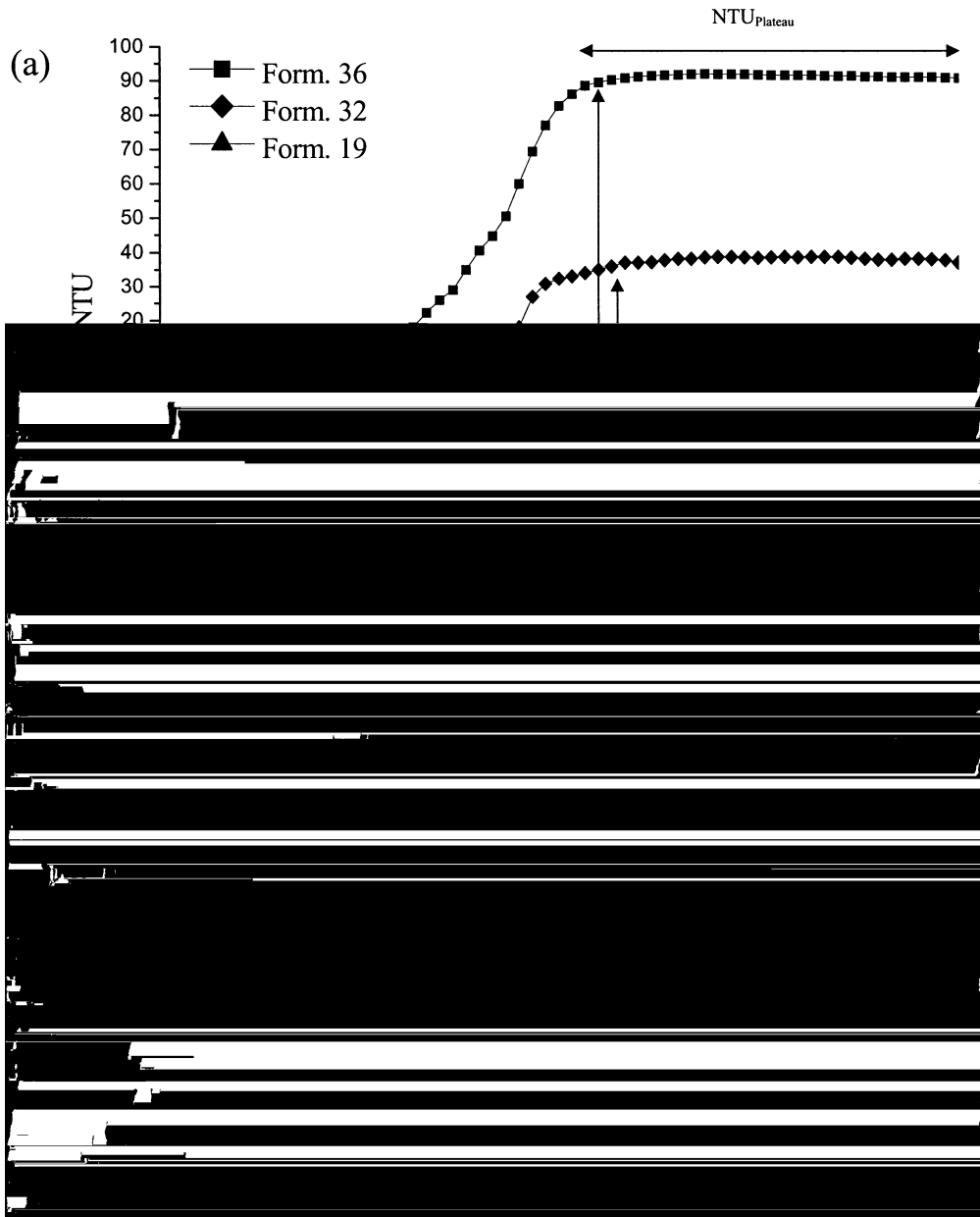
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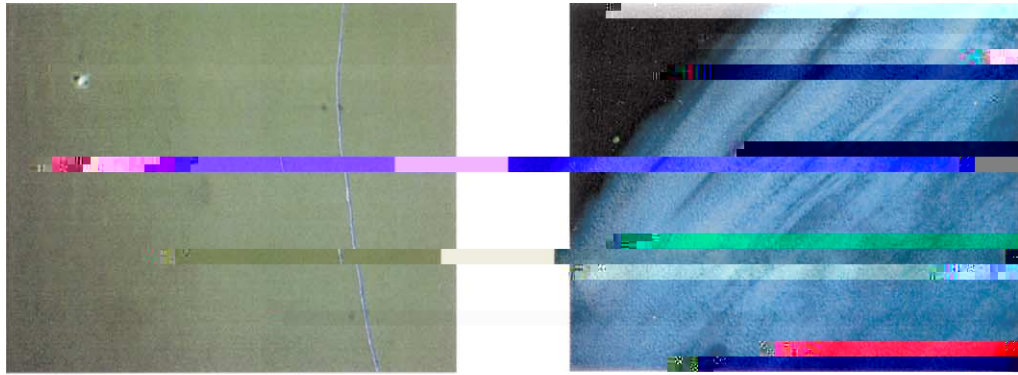
10 15

(% /) 10 (15)

10

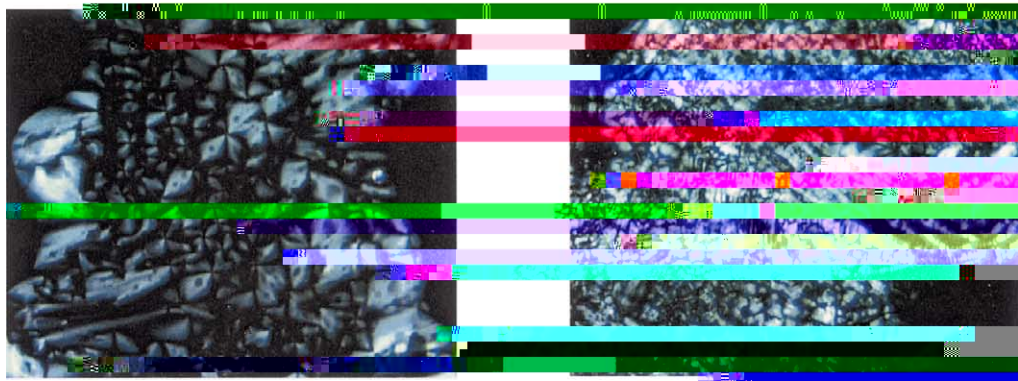
1	18.8	18.8	56.3	6.3	605.5				
2	18.8	18.8	50.0	12.5	220.0	78.2	70.7	94.0	2.18
3	18.8	18.8	43.8	18.8	25.1	8.9	19.5	90.3	7.87
4	18.8	18.8	37.5	25.0	9.0	3.2	6.0	92.8	2.52
5	18.8	18.8	31.3	31.3	6.9	2.5	4.8	88.8	2.52
6	18.8	18.8	25.0	37.5	5.3	1.9	4.1	88.0	2.84
7	18.8	18.8	18.8	43.8	2.4	0.8	3.1	87.4	4.42
8	20.0	20.0	53.3	6.7	513.0				
9	20.0	20.0	46.7	13.3	207.0	69.0	51.7	85.0	1.14
10	20.0	20.0	40.0	20.0	32.7	10.9	13.8	87.3	1.14
11	20.0	20.0	33.3	26.7	12.0	4.0	5.7	91.0	5.35
12	20.0	20.0	26.7	33.3	7.0	2.3	3.5	96.3	1.28
13	20.0	20.0	20.0	40.0	4.5	1.5	3.0	99.5	0.64
14	21.4	21.4	50.0	7.1	510.5				
15	21.4	21.4	42.9	14.3	90.1	28.0	52.0	89.8	3.98
16	21.4	21.4	35.7	21.4	20.1	6.2	10.3	94.7	0.05
17	21.4	21.4	28.6	28.6	10.6	3.3	4.1	94.7	1.12
18		21.4	21.4	35.7	5.9	1.8	2.7		





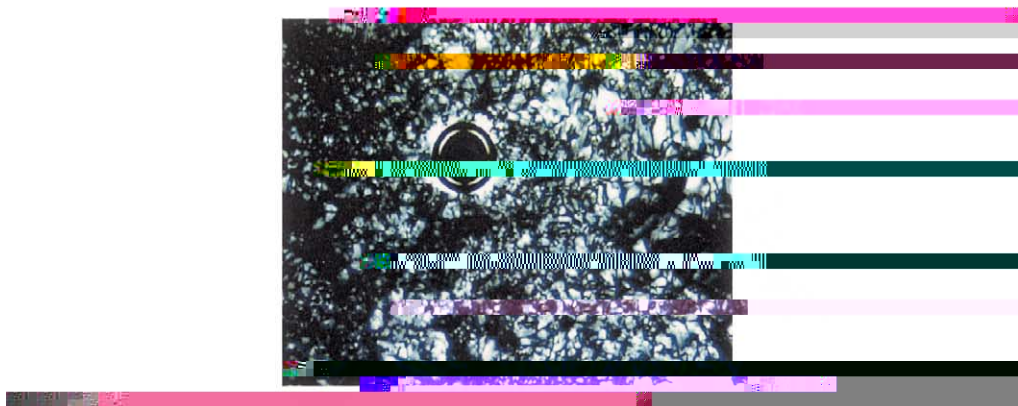
(a)

(b)



(c)

(d)



(e)

Fig. 11. (a) SEM image of the surface of the porous structure. (b) SEM image of the cross-section of the porous structure. (c) SEM image of the porous structure. (d) SEM image of the porous structure. (e) SEM image of the porous structure with a central circular feature.

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