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<sup>3</sup> استاد - عضو هیئت علمی سازمان انرژی اتمی ایران  
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$(W/O \rightarrow O/W) (O/W \rightarrow W/O)$

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$(O/W)$

$(W/O)$

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[ ]

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$(O/W \rightarrow W/O)$

$(W/O \rightarrow O/W)$

$(O/W \rightarrow W/O)$

[ ]

$(W/O \rightarrow O/W)$

(w)

( )

(o)

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(o/w)

(w/o)

(w/o → o/w) (o/w → w/o)

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(o/w)

(w/o)

(o/w → w/o) :

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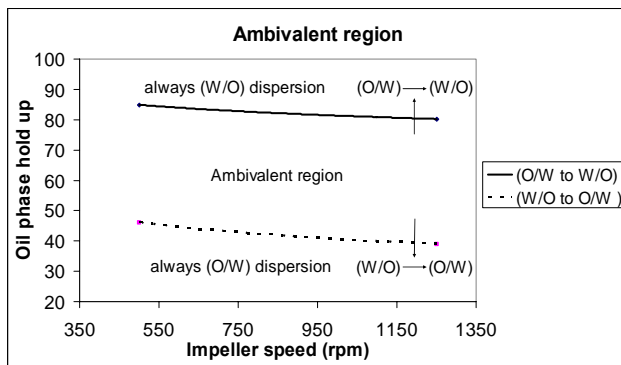
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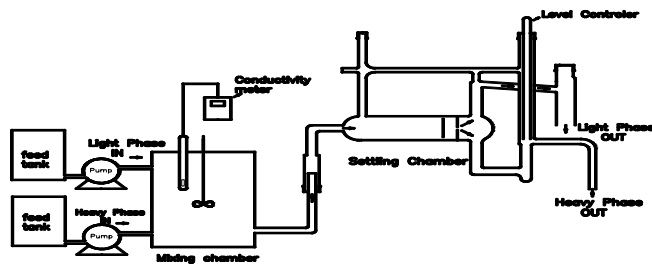
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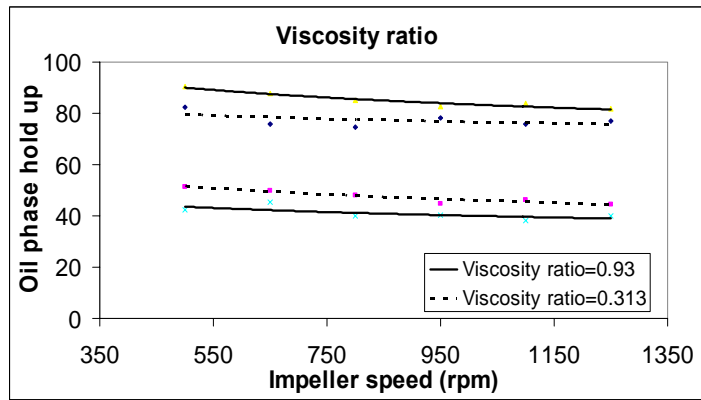
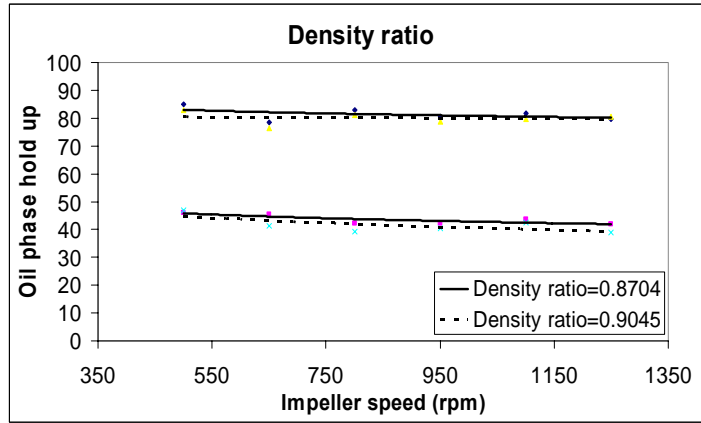


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$\sigma$ (N/m)	$\lambda = \frac{\mu_d}{\mu_c}$	$\frac{\rho_d}{\rho_c}$	$\mu_{aq}$ (Pa.s)	$\mu_{org}$ (Pa.s)	$\rho_{aq}$ (kg/m <sup>3</sup> )	$\rho_{org}$ (kg/m <sup>3</sup> )		
/	/	/	/	/			/	
/	/	/	/	/			/	
/	/	/	/	/			/	
/	/	/	/	/			( + / )	
/	/	/	/	/			( + )	



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(O/W)

(O/W → W/O)

(W/O)

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(W/O → O/W)

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$\rho_d / \rho_c$

(O/W)

(O/W → W/O)

(o/w → w/o)

(w/o → o/w)  
λ

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(λ = μ<sub>d</sub>/μ<sub>c</sub>)

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( $\frac{\phi_{d,i}}{1-\phi_{d,i}} = \sqrt{\frac{\mu_d}{\mu_c}}$ )

λ

(w/o → o/w) (o/w → w/o)  
(o/w → w/o)

(w/o) (o/w)  
λ

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(w/o → o/w)

( )

(D<sub>32</sub>)

(o/w)

λ < 1 (o/w)

λ  
(w/o)  
( )

)λ

( )  
(o/w)  
(w/o)

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- ( ) ( )  
- ( )  $\lambda > 1$  (w/o) ( )

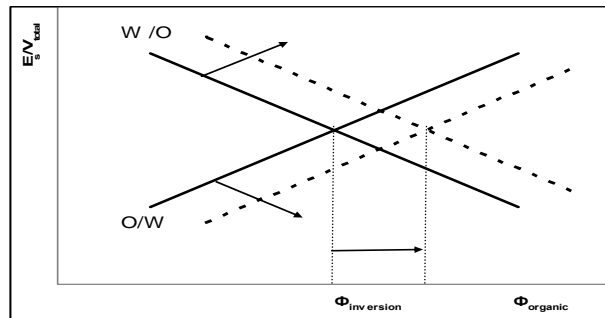
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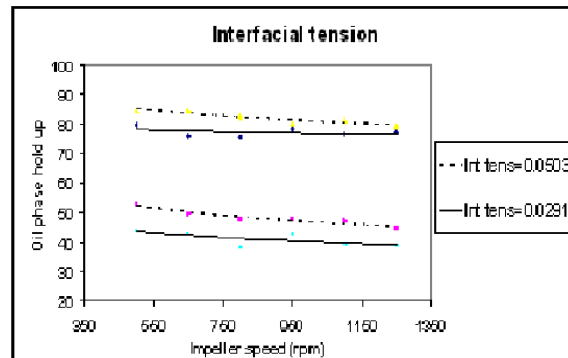
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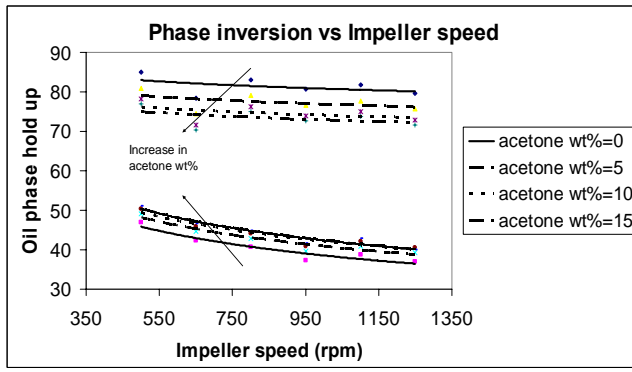
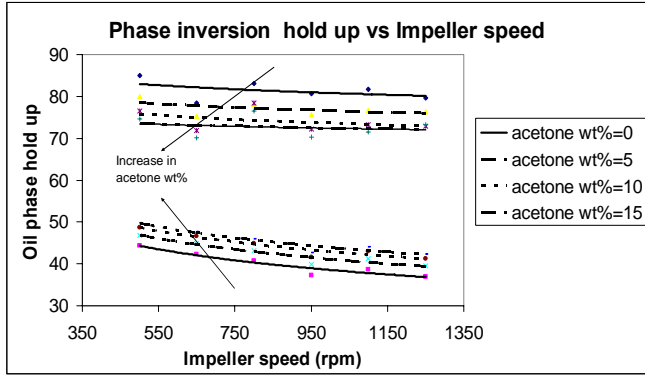
[ ]

$\lambda$

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$\lambda$  (O/W  $\rightarrow$  W/O)  $\lambda$

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(W/O  $\rightarrow$  O/W)  
( )

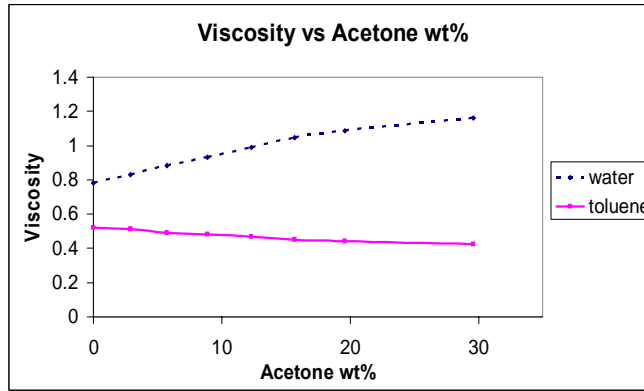
(O/W  $\rightarrow$  W/O)

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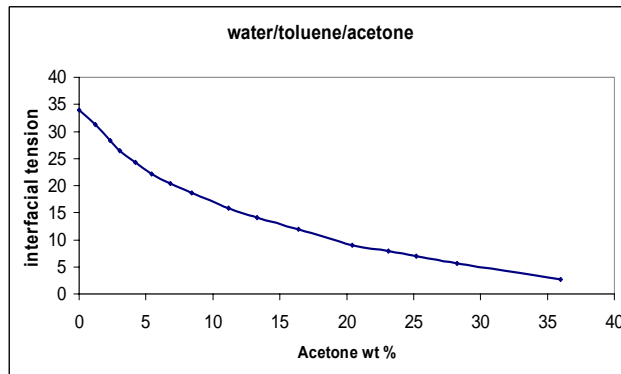
(W/O  $\rightarrow$  O/W)

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(W/O) (O/W)

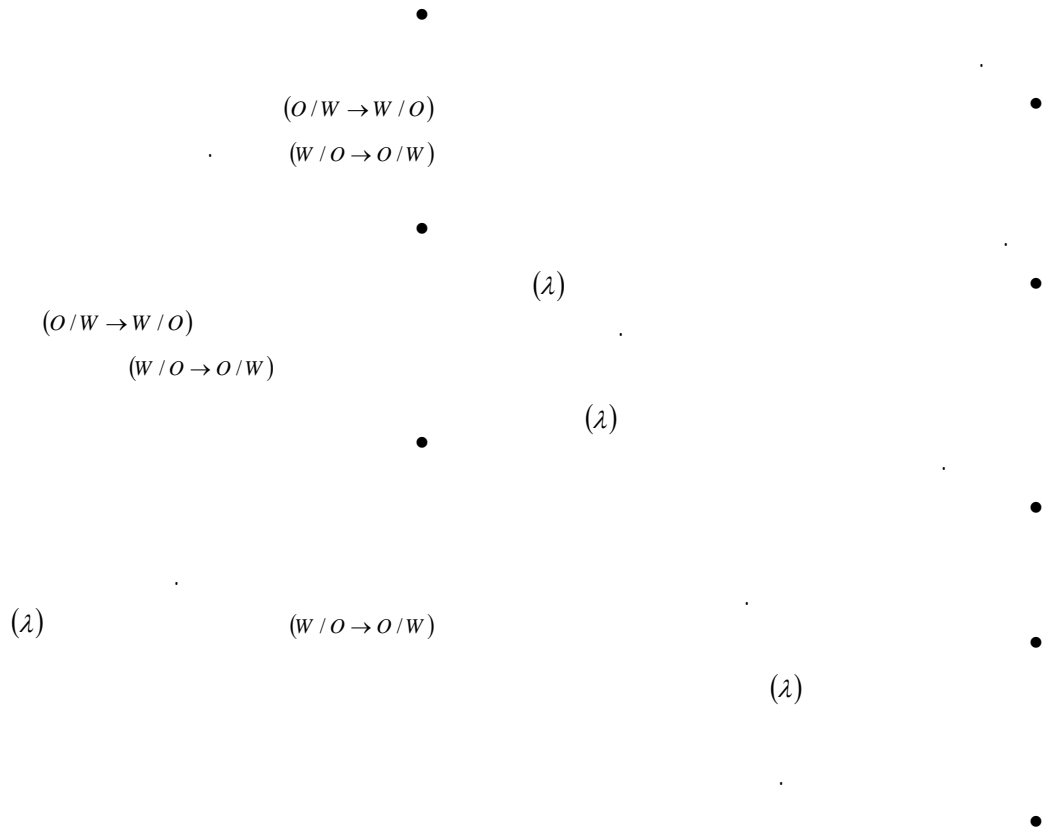
(O/W → W/O)

$(\mu_d/\mu_c > 1)$     $(\mu_d/\mu_c < 1)$   
 (O/W)    $\mu_d/\mu_c < 1$

(W/O → O/W)

(W/O)    $\mu_d/\mu_c > 1$





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- 1- Multi Phases
- 2- Dispersed Phase Hold up
- 3- Ambivalent Region
- 4- Hysteresis
- 5- Secondary Dispersion
- 6- Film Drainage
- 7- Deformation
- 8- Electrostatic Interaction
- 9- Conductivity Meter
- 10- Cocurrent
- 11- Yeo et al
- 12- Mobile
- 13- Immobile