

## Supporting information

### Numerical simulation of mixing and salt washing effects of static mixer in electric desalination process

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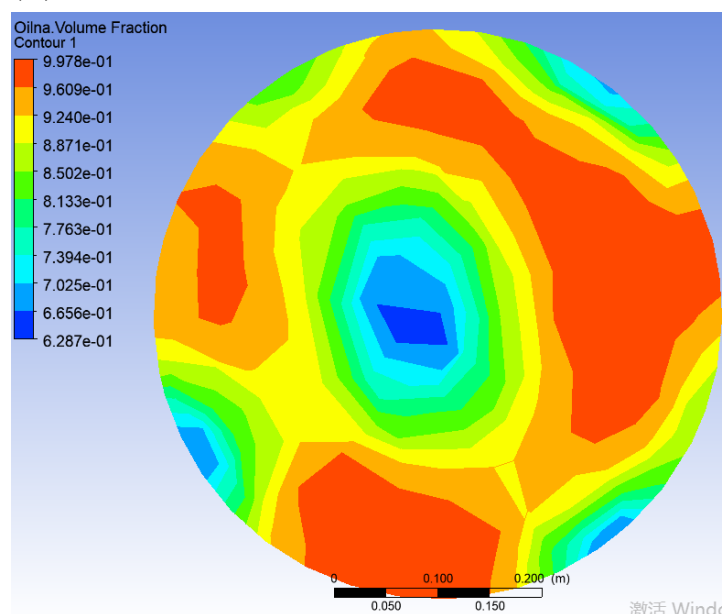
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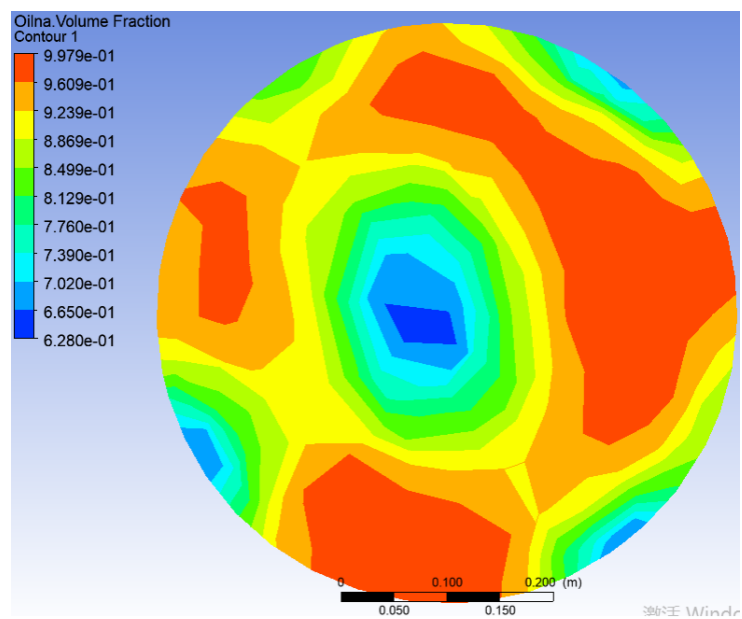
#### Text S1

The supplementary literature provides information on the specific distribution of oil and water.

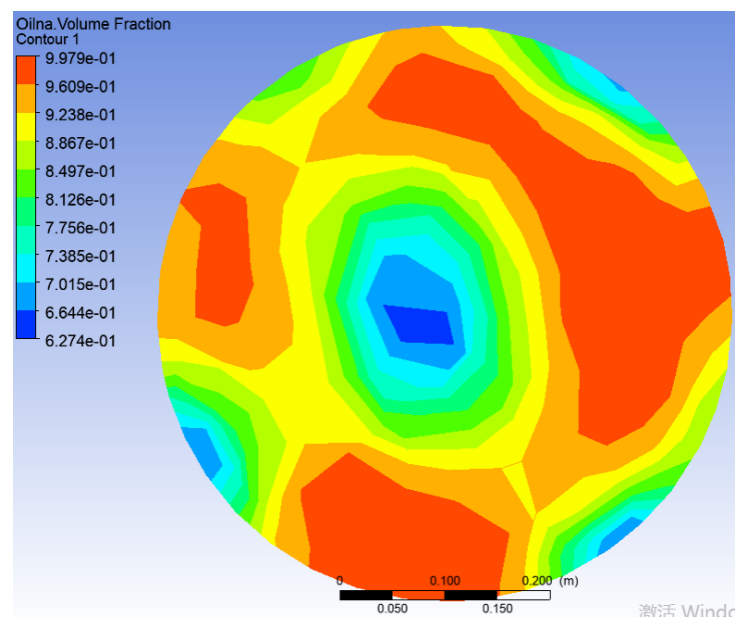
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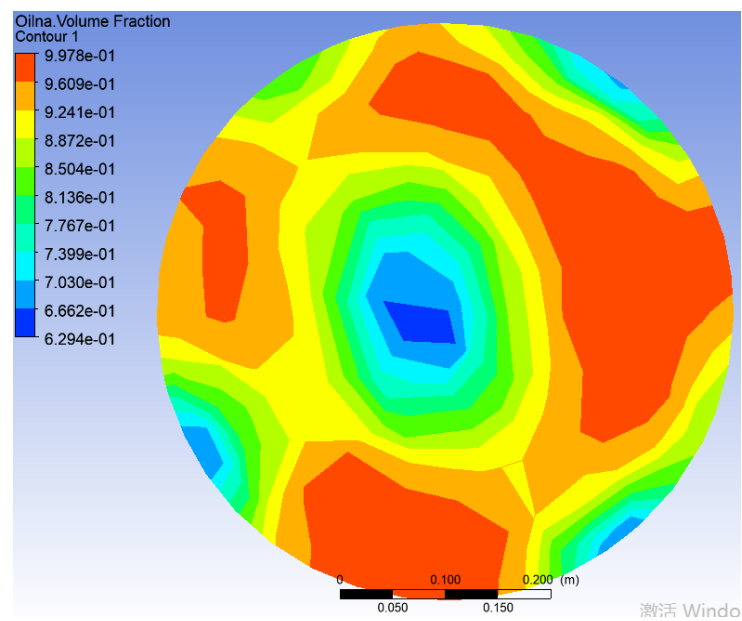
(B)



(C)

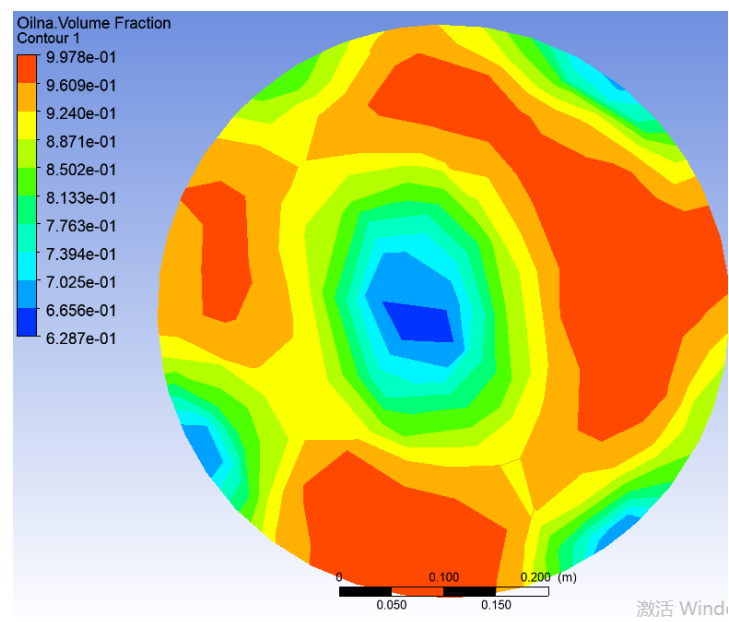


(D)

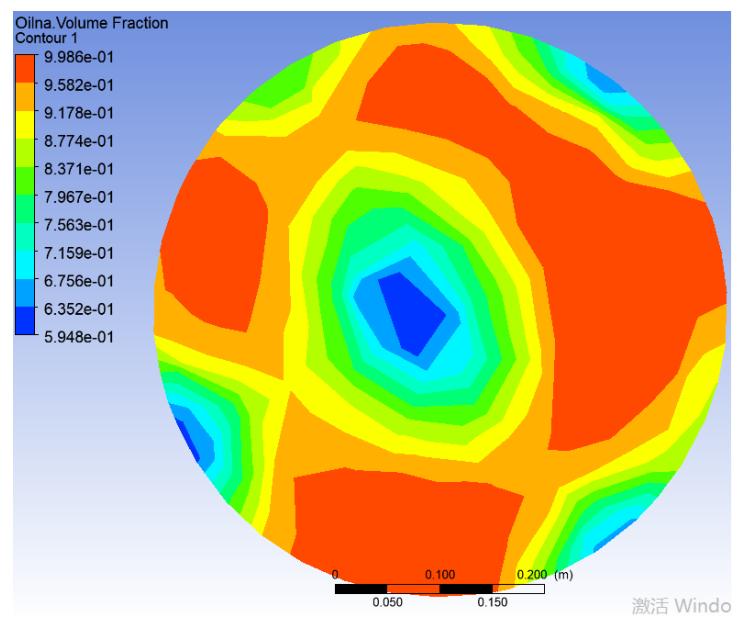


**Figure S1.** Distribution of oil and water at the outlet with different oil density  
(A) 860Kg/m<sup>3</sup>(B) 880Kg/m<sup>3</sup>(C) 890Kg/m<sup>3</sup> (D) 900Kg/m<sup>3</sup>

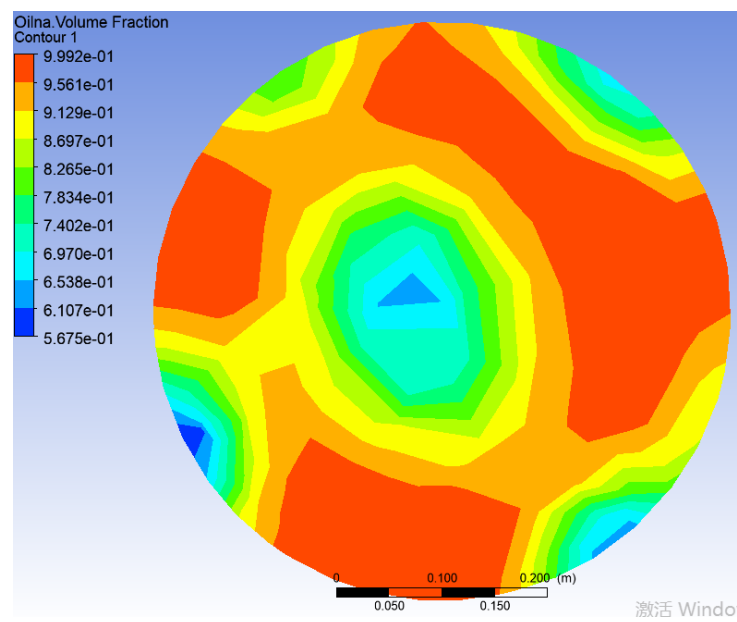
(A)



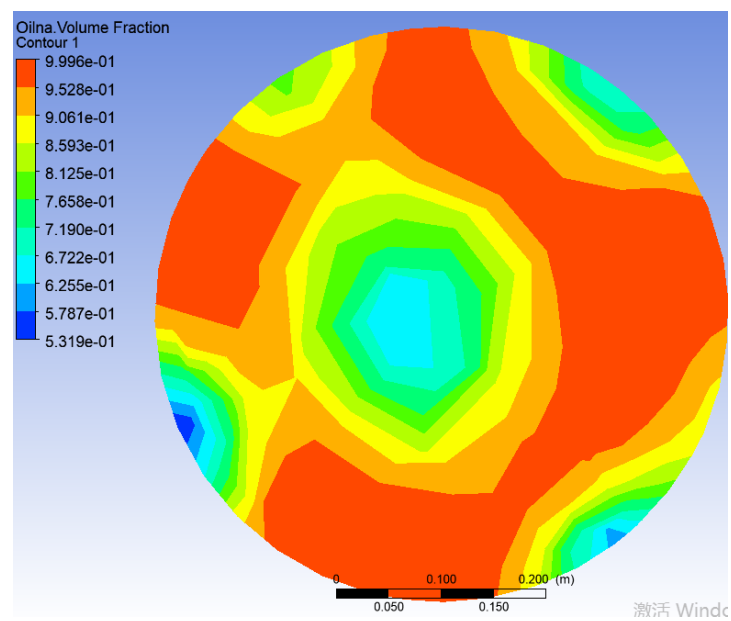
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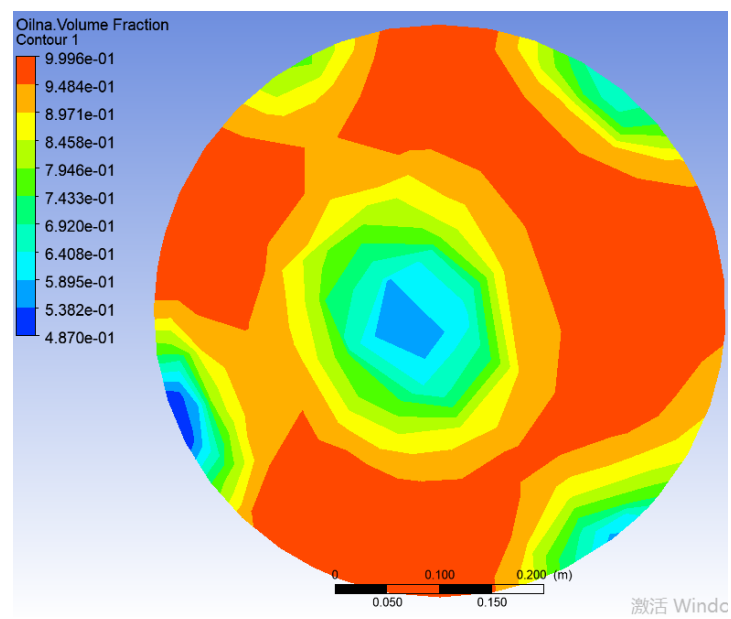
(C)



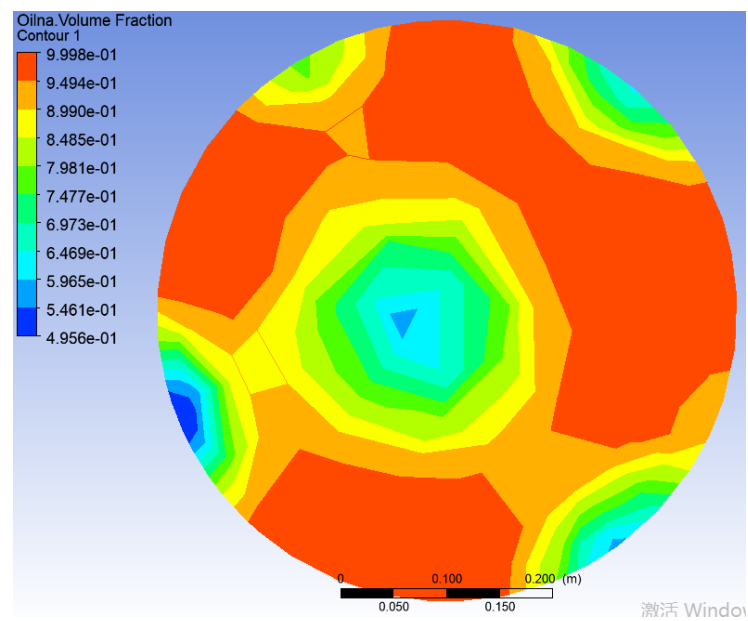
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(E)



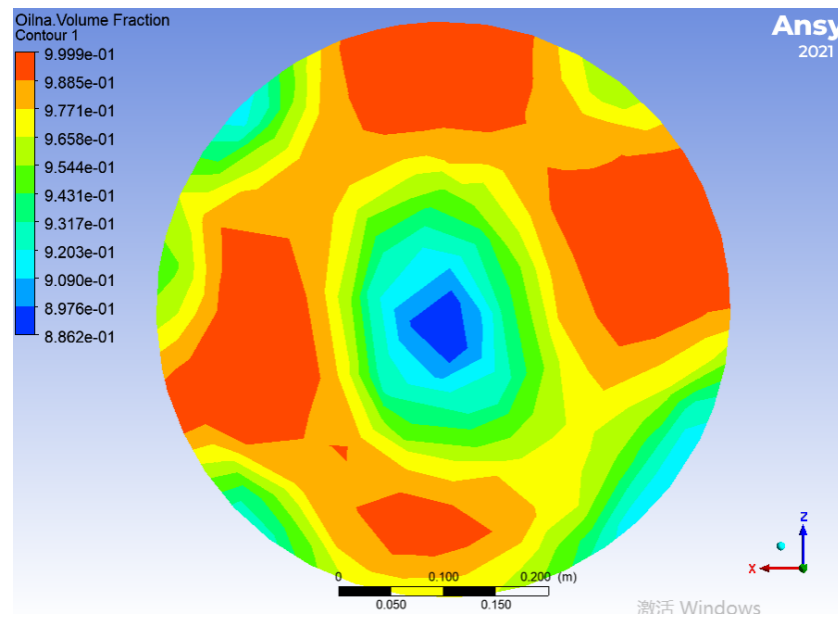
(F)



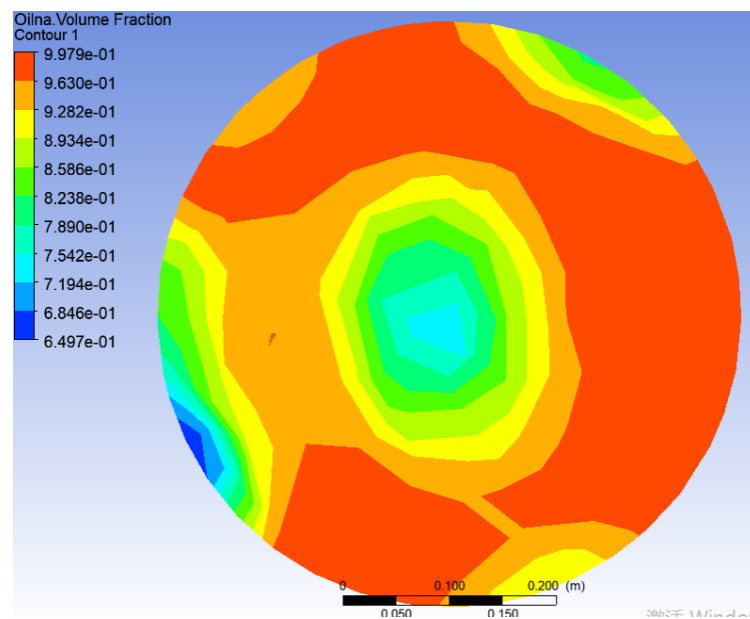
**Figure S2.** Distribution of oil and water at the outlet with different oil viscosity

(A) 0.001Kg/(m\*s) (B) 0.003Kg/(m\*s) (C)0.005Kg/(m\*s) (D)0.007Kg/(m\*s)  
(E)0.009Kg/(m\*s) (F)0.012Kg/(m\*s)

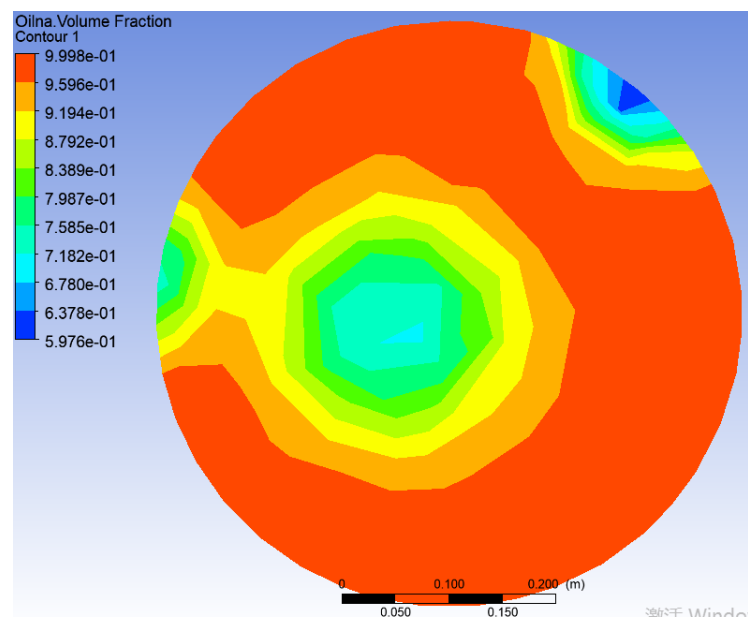
(A)



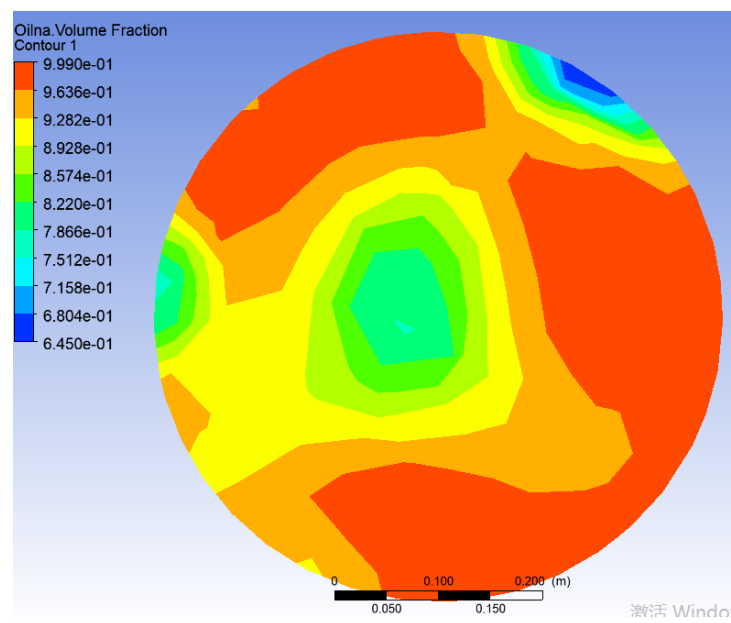
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(C)

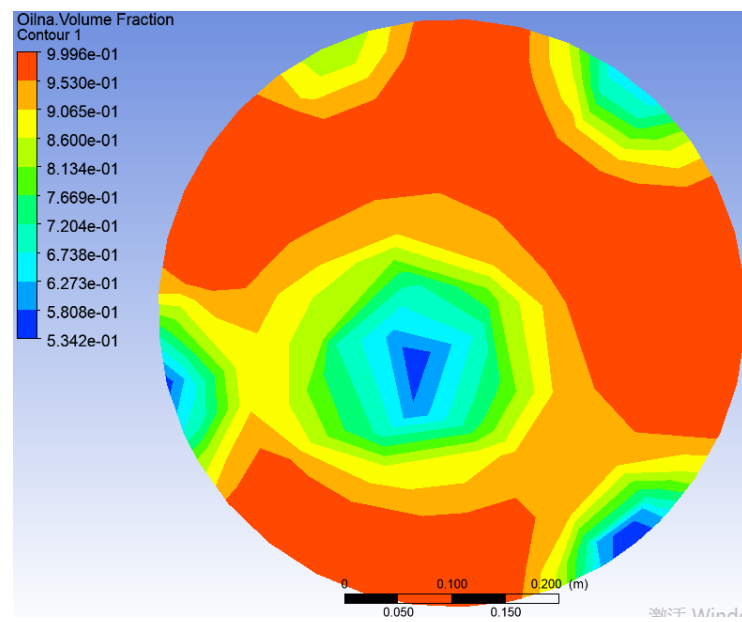


(D)



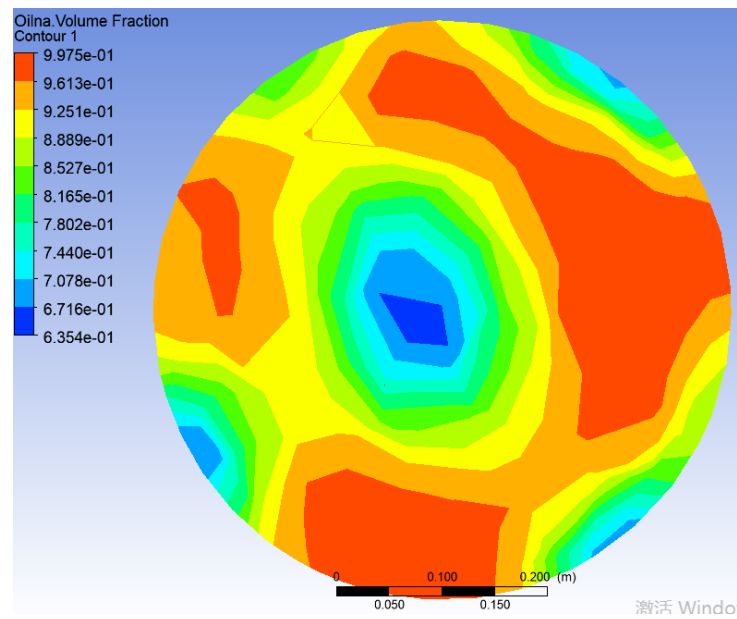


(E)

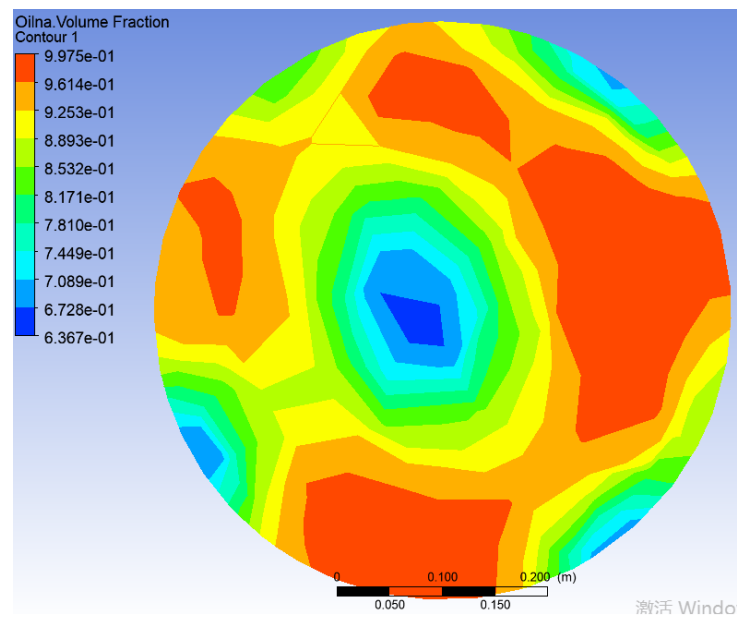


**Figure S3.** Distribution of oil and water at the outlet with Different quantities of injected water(A) 3% (B) 5% (C) 8% (D) 10% (E) 12%

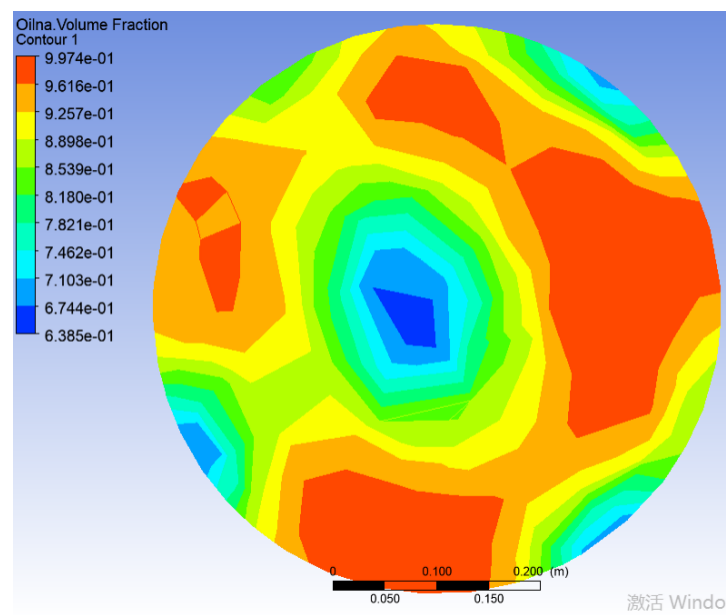
(A)



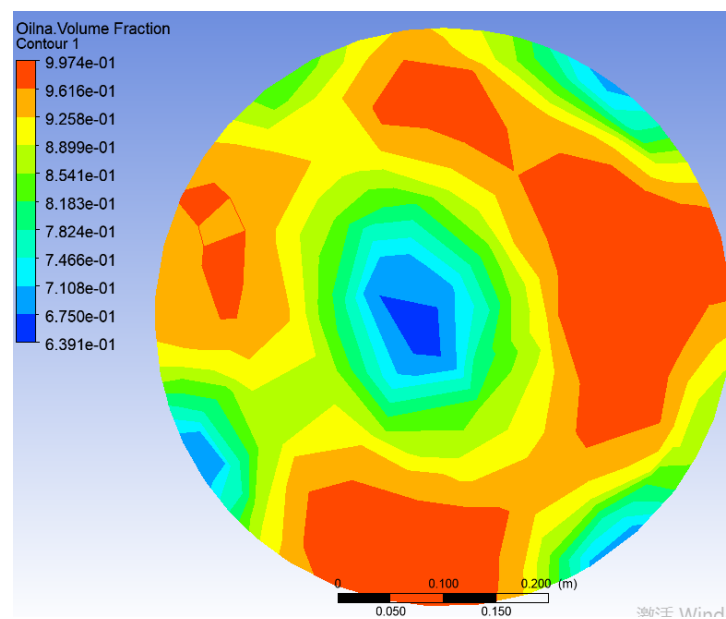
(B)



(C)



(D)



**Figure S4.** Distribution of oil and water at the outlet with different Oil-water interfacial tension (A)  $10^{-6}$  N/m (B) 0.005 N/m (C) 0.01 N/m (D) 0.02 N/m