






<b>Exercise 12</b>	<b>Viscosity coefficient</b>		<i>Theory:</i>
Team:	Name:		<i>Experiment:</i>
Date:	Weeks day and hour:	Major, group:	<i>Remarks</i>

 *Stokes equation* .....


 *Formula for a Reynolds number:*.....

 *Equation for one droplet volume:* .....

 *Single droplet radius equation.:* .....

 *The formula for the uncertainty of the viscosity coefficient from the propagation of  
uncertain principle :*.....

.....

 *The formula for the uncertainty of the Reynolds number from the propagation of uncertain  
principle:*.....

.....

<b>First measurement</b>		<b>Second measurement</b>	
Droplets number		Droplets number	
No	Droplet fall time [ ]	No	Droplet fall time [ ]
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	
t = ..... ± ..... [ ]		t = ..... ± ..... [ ]	

**First measurement**

The distance between the marks on the cylinder:  $L = \dots \pm \dots$  [ ]

The average droplet radius:  $r = \dots \pm \dots$  [ ]

Coefficient of viscosity:  $\eta = \dots \pm \dots$  [ ]

Reynolds number:  $Re = \dots \pm \dots$  [ ]

**Second measurement**

The distance between the marks on the cylinder:  $L = \dots \pm \dots$  [ ]

The average droplet radius:  $r = \dots \pm \dots$  [ ]

Coefficient of viscosity:  $\eta = \dots \pm \dots$  [ ]

Reynolds number:  $Re = \dots \pm \dots$  [ ]

**Measurement comparison and conclusions:**