• Making viscous suspensions. (besides water - 1cP)

#	viscosity/cp	solute	solute:water (weight)
①	2.50	PVP	1:99
②	4.65	PVP	2:98
③	2.50	glycerol	32.2 : 67.8

① : PVP: 0.051 g
water : 5.05 ml (5.049 g)

② : PVP : 0.082 g
water : 4.018 g → 4.018 ml
→ 4.020 ml

③ Glycerol : 0.765 g
Water = 1.6107 g → 1.611 ml

2016/1/22 BMC

- Calibration and Testing

  - made water + 9.51 μM diameter ~10 μm
    water + 1.01 μM } polystyrene beads
    21 μm
    for testing.

20x objective, 10 μm:

# of pixels in a single particle along a diameter:

18, 20, 21, 23, 21, 23 avg: 21

Dans counted Sissi counted

$\Rightarrow \frac{10\ \mu m}{21\ pixels} = 0.48 \frac{\mu m}{pixel}$

40x objective, 10 μm:

# of pixels in a single particle along diameter:

40, 32, 27, 43, 39, 33 avg: 35.67

Sissi

$\Rightarrow 0.28 \frac{\mu m}{pixel} \rightarrow 3.57e^6 \frac{pixel}{m}$

40x: $\frac{pixel}{0.28\ \mu m} \cdot \frac{10^6\ \mu m}{1\ m} = 3.57 \times 10^6 \frac{pixel}{m}$

1125

- made polystyrene suspensions for:

1. H_2O + 0.47 μm (diameter)
2. 2.50 cp PVP + 0.47 μM
3. 4.65 cp PVP + 0.47 μM
4. 2.30 cp PVP + 1.01 μM
5. 2.30 cp glycerol + 0.47 μM

slides used:

5440

5421

40x mag

to simulated:

~~cal~~ experimental:

Trial #	D	D mean	Dmonte carlo (N=1000)	D
1	~~4.83e-12~~ ~~1.822e-12~~ ~~7.79e-15~~			~~1.95e-12~~
	1.8256e-12	1.8184e-12	7.7701e-15	1.9464e-12
2	7.3024e-13	7.2988 e-13	3.2730e-15	1.1515e-12
3.	~~7.3024 X10-13~~ 3.9260X10-13	~~7.2988~~ e-13 3.9266e-13	~~3.2730~~ 1.6801e-15	4.0377e-13
4	3.3982e-13	3.3975e-13	1.4979e-15	4.3144e-13
5	7.3024e-13	7.3291e-13	3.2063e-15	5.0073~~5~~e-13