LAMPIRAN

Lampiran 1. Hasil ekstrak daun, batang bawah dan akar tebu

Lampiran 2. Fitosom ekstrak tebu (*Saccharum officinarum*)

Lampiran 3. Data hasil uji *Particle Size Analyzer*

Sampel A Replikasi 1

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

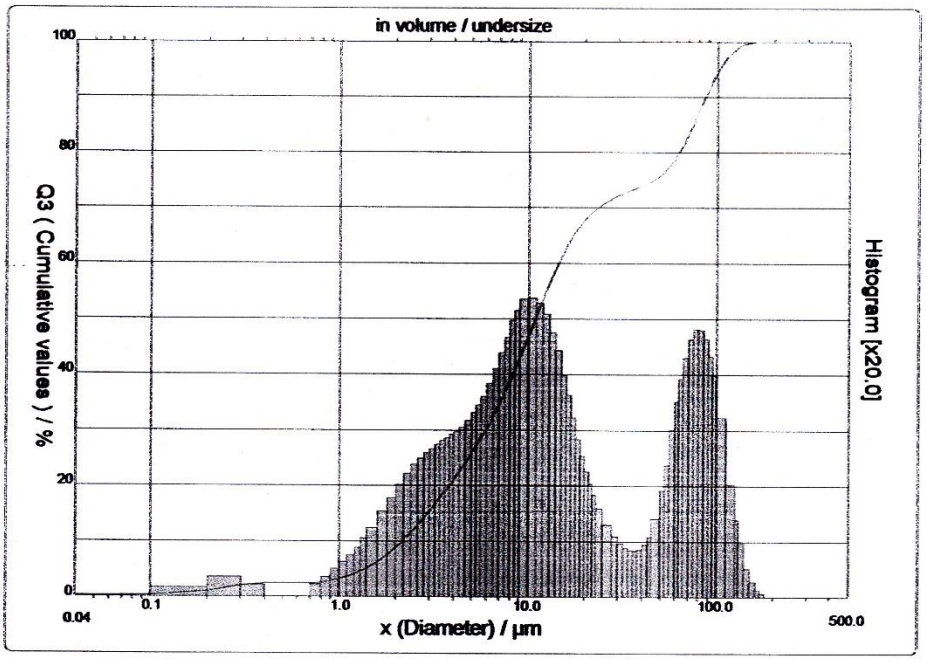
Sample ref.	: Sample_X_
Sample Name	: A
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 25/05/2016	Time : 14:37:36
Index meas.	: 711
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 27 %
Diameter at 10%	: 2.16 µm
Diameter at 50%	: 10.85 µm
Diameter at 90%	: 85.92 µm
Fraunhofer	
Density/Factor	———
Specific surface	———
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	94.84	95.80	96.22	96.61	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.88A1818/7.00/711/m98.13.20.40.1Fh.20.20.40.BiWQ-.0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: A
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 25/05/2016	Time : 14:37:36
Index meas.	: 711
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 27 %
Diameter at 10%	: 2.16 µm
Diameter at 50%	: 10.85 µm
Diameter at 90%	: 85.92 µm
Fraunhofer	
Density/Factor	———
Specific surface	———
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.31	0.33	0.38	1.11	2.07	2.47	2.47	2.47	2.47	2.67
q3	0.00	0.00	0.01	0.07	0.17	0.10	0.00	0.00	0.00	0.11
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	2.95	3.31	3.72	4.17	4.66	5.20	6.35	7.61	8.91	10.25
q3	0.17	0.24	0.31	0.37	0.44	0.52	0.61	0.76	0.88	1.00
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	11.59	12.92	14.21	15.46	16.66	17.82	18.94	20.02	21.07	22.57
q3	1.10	1.18	1.24	1.29	1.32	1.36	1.39	1.42	1.46	1.48
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	24.01	25.86	27.21	28.54	30.28	32.43	34.56	36.68	38.79	40.90
q3	1.52	1.58	1.65	1.72	1.79	1.91	2.04	2.19	2.33	2.48
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	42.96	46.91	50.50	53.72	56.57	59.04	61.18	62.98	64.52	65.81
q3	2.56	2.67	2.68	2.63	2.53	2.37	2.21	1.98	1.81	1.61
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	66.88	67.79	68.56	69.22	69.79	70.71	71.73	72.25	72.68	73.05
q3	1.41	1.26	1.12	1.01	0.91	0.78	0.64	0.54	0.47	0.43
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	73.38	73.69	73.99	74.46	74.80	75.83	76.61	77.52	78.97	80.17
q3	0.41	0.41	0.42	0.46	0.53	0.70	0.95	1.18	1.49	1.75
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	81.45	83.65	85.43	87.61	89.65	91.51	93.15	94.58	97.14	98.69
q3	1.96	2.14	2.31	2.40	2.39	2.31	2.16	1.98	1.61	1.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	99.07	99.57	99.81	99.93	99.98	100.00	100.00	100.00	100.00	100.00
q3	0.69	0.48	0.25	0.13	0.06	0.02	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2.r302.m0.88A1618/7.00/711/m98.13.20.40.1Fh.20.20.40.BlnQ-.0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

Sampel A Replikasi 2

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

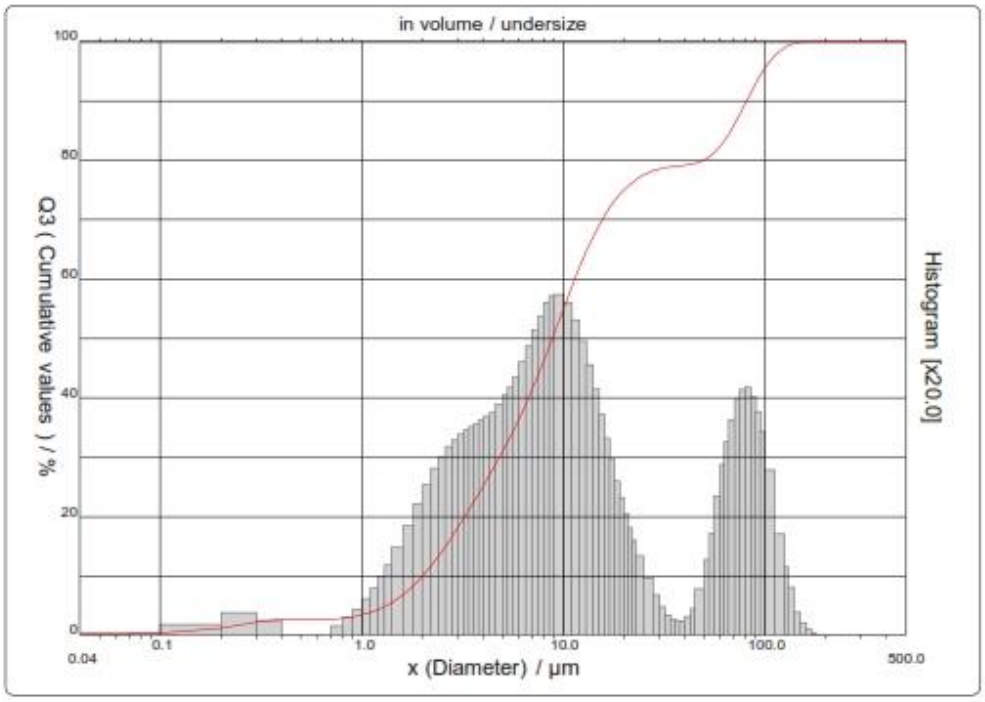
Sample ref.	: Sample_X_
Sample Name	: Fitosom A1
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 26/10/2016	Time : 11:08:53
Index meas.	: 960
Database name	: CilasDB1

Ultrasounds	: 60	s
Obscuration	: 16 %	
Diameter at 10%	: 2.01	µm
Diameter at 50%	: 8.82	µm
Diameter at 90%	: 81.34	µm
Fraunhofer		
Density/Factor	----------	
Specific surface	----------	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	95.72	96.53	96.89	97.23	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.85A1815/7.00/960/m96.13.20.40.1Fh.20.20.40.Bh/Q-.0.0.0.0/i500.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60 s
Sample Name	: Fitosom A1	Obscuration	: 16 %
Sample type	: Cairan	Diameter at 10%	: 2.01 µm
Comments	:	Diameter at 50%	: 8.82 µm
Liquid	:	Diameter at 90%	: 81.34 µm
Dispersing agent	:	Fraunhofer	
Operator	: BBG	Density/Factor	----------
Company	:	Specific surface	----------
Location	:	Automatic dilution	: No / No
Date : 26/10/2016	Time : 11:08:53	Meas./Rins.	: 65s/60s/4
Index meas.	: 960	SOP name	: BBG
Database name	: CilasDB1		

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.31	0.36	0.45	1.28	2.32	2.79	2.79	2.79	2.79	2.92
q3	0.00	0.01	0.02	0.09	0.18	0.12	0.00	0.00	0.00	0.07
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	3.15	3.46	3.86	4.33	4.87	5.47	6.83	8.33	9.94	11.61
q3	0.14	0.21	0.30	0.39	0.49	0.58	0.73	0.92	1.10	1.26
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	13.30	14.96	16.59	18.16	19.67	21.12	22.51	23.84	25.13	26.97
q3	1.40	1.49	1.58	1.64	1.68	1.72	1.75	1.77	1.81	1.83
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	28.72	30.97	32.60	34.19	36.27	38.82	41.32	43.78	46.18	48.53
q3	1.87	1.94	2.01	2.08	2.17	2.29	2.43	2.57	2.68	2.79
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	50.79	54.98	58.68	61.88	64.63	66.97	68.95	70.61	72.00	73.17
q3	2.85	2.86	2.80	2.65	2.47	2.27	2.07	1.85	1.65	1.47
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	74.14	74.96	75.65	76.23	76.72	77.49	78.24	78.56	78.77	78.91
q3	1.29	1.15	1.02	0.90	0.79	0.66	0.48	0.33	0.23	0.17
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	79.01	79.10	79.18	79.33	79.47	80.03	80.54	81.19	82.31	83.28
q3	0.13	0.12	0.11	0.15	0.22	0.38	0.63	0.85	1.17	1.43
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	84.33	86.16	87.67	89.52	91.27	92.86	94.27	95.49	97.67	98.96
q3	1.63	1.80	1.98	2.06	2.08	2.00	1.88	1.71	1.39	0.85
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	99.27	99.68	99.86	99.95	99.99	100.00	100.00	100.00	100.00	100.00
q3	0.57	0.40	0.19	0.10	0.05	0.01	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/960/m98,13,20,40,1Fh,20,20,40,8h/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Sampel A Replikasi 3

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

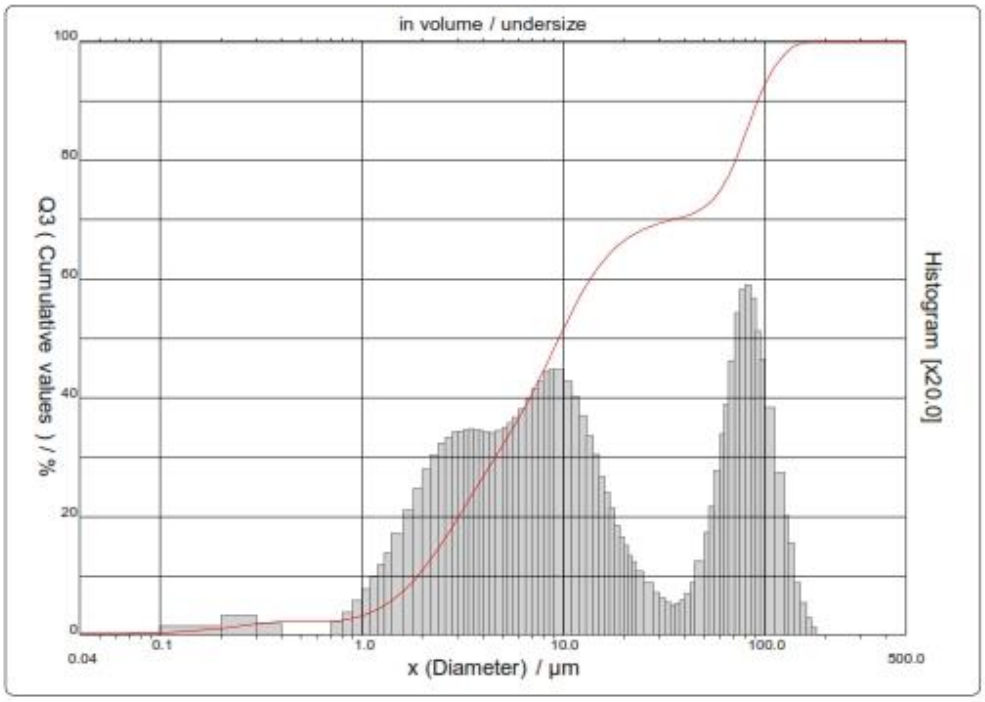
Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60	s
Sample Name	: Fitosom A2	Obscuration	: 20 %	
Sample type	: Cairan	Diameter at 10%	: 1.90	µm
Comments	:	Diameter at 50%	: 9.51	µm
Liquid	:	Diameter at 90%	: 92.27	µm
Dispersing agent	:	Fraunhofer		
Operator	: BBG	Density/Factor	----------	
Company	:	Specific surface	----------	
Location	:	Automatic dilution	: No / No	
Date : 18/10/2016	Time : 07:03:41	Meas./Rins.	: 65s/60s/4	
Index meas.	: 951	SOP name	: BBG	
Database name	: CilasDB1			

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	93.00	94.12	94.62	95.09	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/951/m98,13,20,40,1Fh,20,20,40,8h/Q-,0,0,0,0i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9,45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: Fitosom A2
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 18/10/2016	Time : 07:03:41
Index meas.	: 951
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 20 %
Diameter at 10%	: 1.90 µm
Diameter at 50%	: 9.51 µm
Diameter at 90%	: 92.27 µm
Fraunhofer	
Density/Factor	----------
Specific surface	----------
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.29	0.33	0.40	1.12	2.03	2.40	2.40	2.40	2.40	2.60
q3	0.00	0.01	0.01	0.07	0.16	0.09	0.00	0.00	0.00	0.11
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	2.91	3.33	3.84	4.43	5.09	5.80	7.39	9.11	10.92	12.77
q3	0.19	0.29	0.38	0.49	0.59	0.69	0.85	1.05	1.23	1.39
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	14.61	16.41	18.13	19.77	21.31	22.77	24.15	25.45	26.68	28.40
q3	1.51	1.61	1.66	1.70	1.71	1.72	1.73	1.72	1.72	1.70
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	30.00	32.00	33.42	34.79	36.55	38.67	40.72	42.71	44.63	46.50
q3	1.70	1.72	1.75	1.78	1.83	1.90	1.98	2.07	2.13	2.21
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	48.28	51.56	54.40	56.83	58.89	60.62	62.08	63.28	64.29	65.14
q3	2.23	2.23	2.13	2.00	1.84	1.67	1.52	1.33	1.19	1.06
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	65.83	66.42	66.93	67.36	67.74	68.36	69.05	69.39	69.67	69.90
q3	0.91	0.82	0.75	0.66	0.61	0.53	0.44	0.35	0.31	0.27
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	70.10	70.30	70.51	70.86	71.14	72.05	72.75	73.58	74.91	76.06
q3	0.25	0.26	0.29	0.35	0.44	0.62	0.86	1.08	1.38	1.69
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	77.32	79.67	81.74	84.36	86.85	89.11	91.04	92.70	95.73	97.82
q3	1.94	2.30	2.70	2.91	2.94	2.83	2.56	2.32	1.91	1.36
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	98.37	99.17	99.59	99.83	99.95	100.00	100.00	100.00	100.00	100.00
q3	1.00	0.77	0.44	0.27	0.14	0.06	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/951/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Sampel B Replikasi 1

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

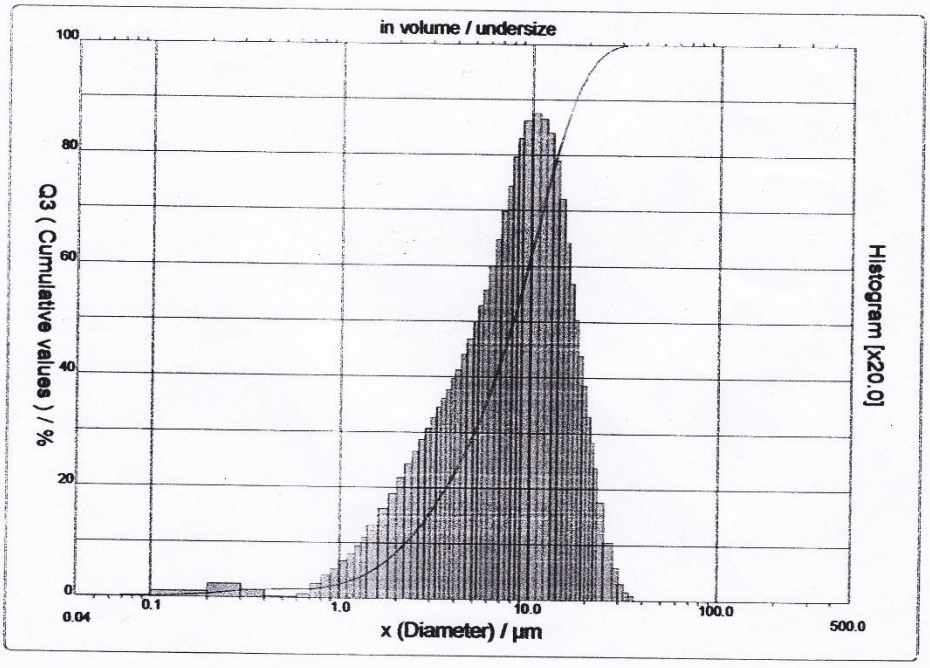
Sample ref.	: Sample_X_
Sample Name	: B
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 25/05/2016	Time : 14:45:59
Index meas.	: 712
Database name	: CilasDB1

Ultrasounds	: 60	s
Obscuration	: 28 %	
Diameter at 10%	: 2.23	µm
Diameter at 50%	: 8.13	µm
Diameter at 90%	: 16.98	µm
Fraunhofer		
Density/Factor	———	
Specific surface	———	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.88A1818/7.00/712/m98.13.20.40.1Fh.20.20.40.BhQ-.0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: B
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 25/05/2016	Time : 14:45:59
Index meas.	: 712
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 28 %
Diameter at 10%	: 2.23 µm
Diameter at 50%	: 8.13 µm
Diameter at 90%	: 16.98 µm
Fraunhofer	
Density/Factor	———
Specific surface	———
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.21	0.21	0.24	0.69	1.32	1.57	1.59	1.61	1.67	1.90
q3	0.00	0.00	0.01	0.05	0.11	0.06	0.01	0.01	0.03	0.13
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	2.22	2.59	3.02	3.49	4.00	4.55	5.74	7.03	8.38	9.79
q3	0.20	0.26	0.33	0.39	0.46	0.54	0.65	0.80	0.93	1.08
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	11.23	12.68	14.13	15.57	17.01	18.44	19.85	21.24	22.63	24.67
q3	1.20	1.32	1.42	1.52	1.62	1.72	1.80	1.87	1.97	2.05
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	26.70	29.37	31.36	33.35	35.98	39.27	42.56	45.86	49.15	52.46
q3	2.19	2.33	2.49	2.63	2.77	2.99	3.23	3.48	3.71	3.97
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	55.71	61.94	67.66	72.82	77.43	81.44	84.85	87.69	90.05	92.02
q3	4.14	4.30	4.37	4.32	4.19	3.94	3.60	3.20	2.83	2.51
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	93.64	94.99	96.09	96.99	97.71	98.71	99.51	99.78	99.91	99.97
q3	2.18	1.92	1.64	1.41	1.18	0.87	0.51	0.28	0.15	0.07
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1618/7,00/712/m98,13,20,40,1Fh,20,20,40,BlvQ-,0,0,0,0/600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9,45/635

Sampel B Replikasi 2

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

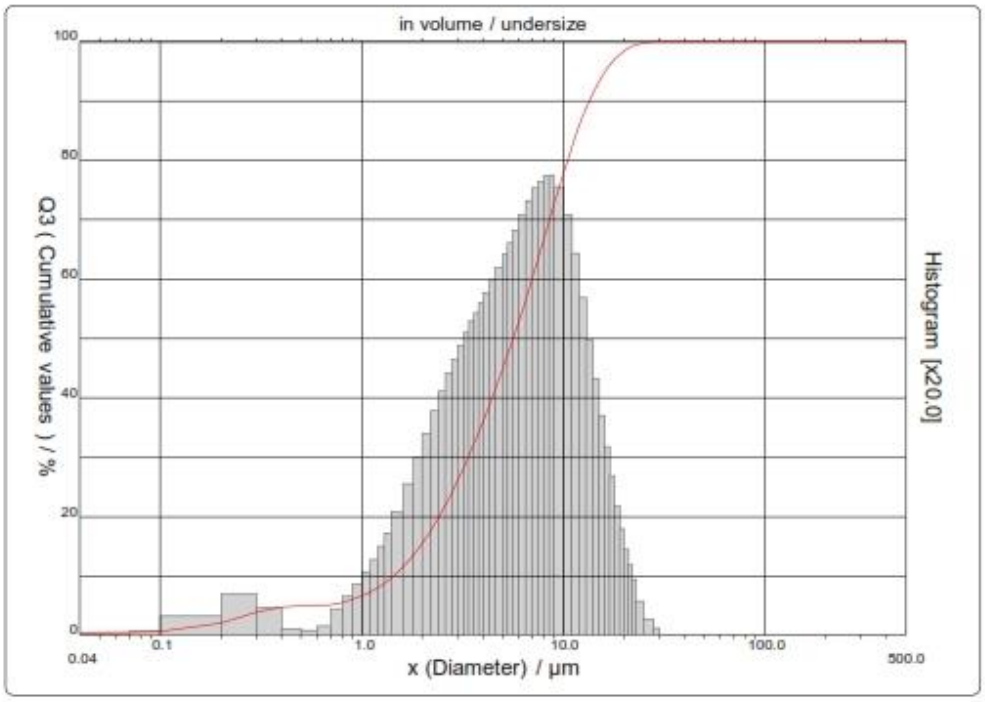
Sample ref.	: Sample_X_
Sample Name	: Fitosom B1
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 18/10/2016	Time : 07:11:44
Index meas.	: 952
Database name	: CilasDB1

Ultrasounds	: 60	s
Obscuration	: 15 %	
Diameter at 10%	: 1.44	µm
Diameter at 50%	: 5.65	µm
Diameter at 90%	: 13.49	µm
Fraunhofer		
Density/Factor	----------	
Specific surface	----------	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.88A1815/7.00/952/m98.13.20.40.1Fh.20.20.40.Bh/Q-.0.0.0.0/i500.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60 s
Sample Name	: Fitosom B1	Obscuration	: 15 %
Sample type	: Cairan	Diameter at 10%	: 1.44 µm
Comments	:	Diameter at 50%	: 5.65 µm
Liquid	:	Diameter at 90%	: 13.49 µm
Dispersing agent	:	Fraunhofer	
Operator	: BBG	Density/Factor	----------
Company	:	Specific surface	----------
Location	:	Automatic dilution	: No / No
Date : 18/10/2016	Time : 07:11:44	Meas./Rins.	: 65s/60s/4
Index meas.	: 952	SOP name	: BBG
Database name	: CilasDB1		

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.54	0.60	0.73	2.14	3.95	4.81	4.96	5.04	5.19	5.57
q3	0.00	0.01	0.03	0.16	0.34	0.23	0.05	0.03	0.07	0.22
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	6.07	6.66	7.32	8.04	8.82	9.65	11.47	13.43	15.49	17.61
q3	0.32	0.43	0.53	0.63	0.74	0.85	1.04	1.27	1.49	1.70
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	19.76	21.91	24.05	26.15	28.21	30.23	32.21	34.13	36.01	38.74
q3	1.88	2.05	2.20	2.32	2.43	2.54	2.64	2.71	2.79	2.88
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	41.38	44.76	47.21	49.59	52.67	56.38	59.93	63.33	66.56	69.63
q3	2.98	3.09	3.20	3.29	3.40	3.53	3.65	3.76	3.81	3.86
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	72.53	77.74	82.16	85.82	88.80	91.21	93.16	94.72	95.98	96.98
q3	3.87	3.77	3.53	3.21	2.84	2.48	2.15	1.84	1.58	1.33
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	97.75	98.35	98.81	99.17	99.44	99.75	99.95	100.00	100.00	100.00
q3	1.09	0.89	0.72	0.59	0.46	0.28	0.13	0.06	0.00	0.00
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/952/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9,45/635

Sampel B Replikasi 3

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

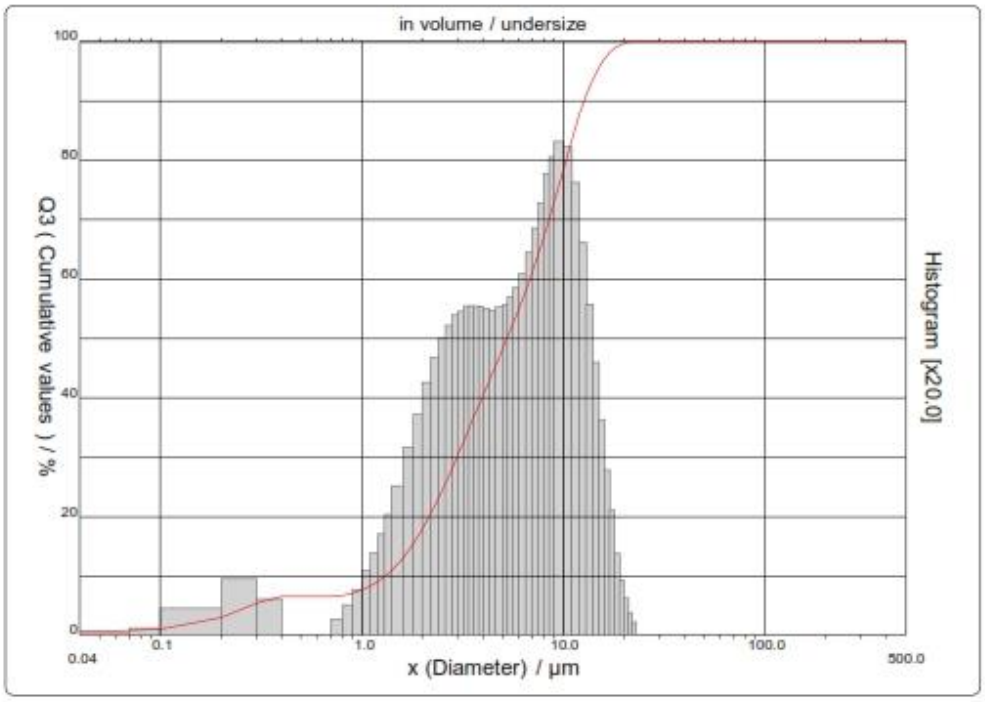
Sample ref.	: Sample_X_
Sample Name	: Fitosom B2
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 26/10/2016	Time : 11:15:32
Index meas.	: 961
Database name	: CilasDB1

Ultrasounds	: 60	s
Obscuration	: 20 %	
Diameter at 10%	: 1.31	µm
Diameter at 50%	: 5.26	µm
Diameter at 90%	: 12.72	µm
Fraunhofer		
Density/Factor	----------	
Specific surface	----------	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.88A1815/7.00/961/m98.13.20.40.1Fh.20.20.40.Bh/Q-.0.0.0.0/i500.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: Fitosom B2
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 26/10/2016	Time : 11:15:32
Index meas.	: 961
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 20 %
Diameter at 10%	: 1.31 µm
Diameter at 50%	: 5.26 µm
Diameter at 90%	: 12.72 µm
Fraunhofer	
Density/Factor	----------
Specific surface	----------
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.71	0.86	1.10	3.06	5.48	6.58	6.58	6.58	6.58	6.80
q3	0.01	0.02	0.05	0.22	0.47	0.30	0.00	0.00	0.00	0.13
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	7.17	7.68	8.33	9.09	9.95	10.90	13.02	15.38	17.86	20.43
q3	0.25	0.38	0.54	0.69	0.85	1.01	1.25	1.58	1.85	2.12
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	23.01	25.55	28.00	30.36	32.59	34.72	36.73	38.63	40.43	42.95
q3	2.33	2.50	2.60	2.69	2.72	2.76	2.77	2.76	2.76	2.74
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	45.29	48.21	50.27	52.26	54.82	57.91	60.94	63.94	66.92	69.91
q3	2.73	2.76	2.78	2.84	2.92	3.04	3.22	3.42	3.63	3.88
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	72.83	78.39	83.36	87.57	90.93	93.55	95.56	97.04	98.11	98.87
q3	4.02	4.15	4.10	3.81	3.30	2.78	2.29	1.80	1.39	1.05
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	99.34	99.64	99.83	99.94	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.68	0.46	0.31	0.19	0.11	0.00	0.00	0.00	0.00	0.00
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/961/m98,13,20,40,1Fh,20,20,40,8h/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Sampel C Replikasi 1

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: C
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 25/05/2016	Time : 14:52:02
Index meas.	: 713
Database name	: CilasDB1

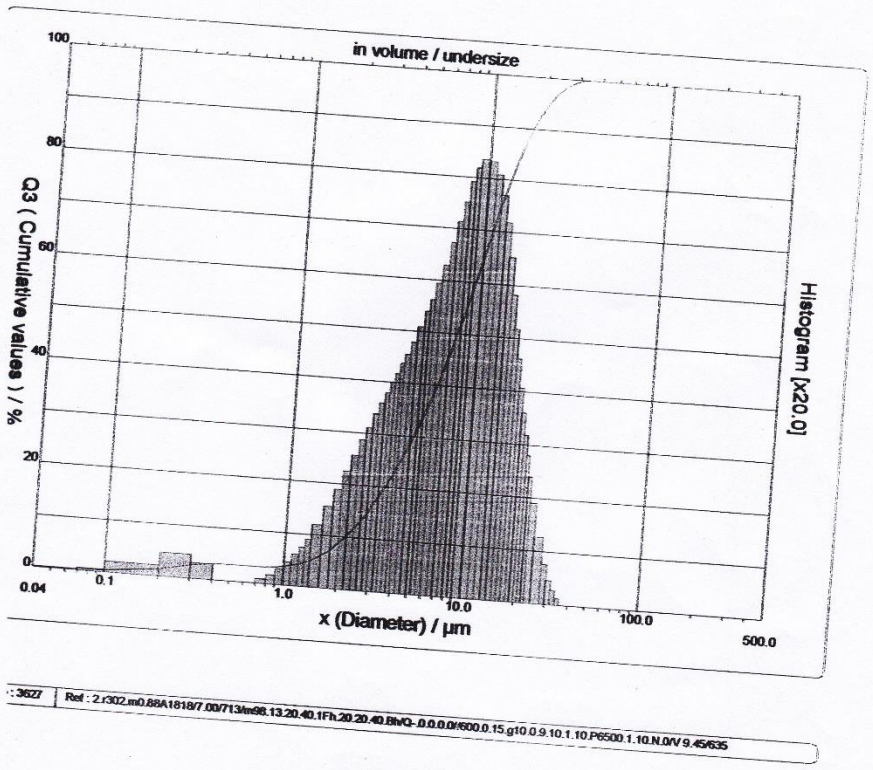
Ultrasounds	: 60	s
Obscuration	: 16 %	
Diameter at 10%	: 2.17	µm
Diameter at 50%	: 7.70	µm
Diameter at 90%	: 16.97	µm
Fraunhofer		
Density/Factor	_____	
Specific surface	_____	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes

in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



: 3527 Ref : 2.r302.m0.88A1818/7.00/713/m98.13.20.40.1Fh.20.20.40.BtvQ-.0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: C
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 25/05/2016	Time : 14:52:02
Index meas.	: 713
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 16 %
Diameter at 10%	: 2.17 µm
Diameter at 50%	: 7.70 µm
Diameter at 90%	: 16.97 µm
Fraunhofer	
Density/Factor	———
Specific surface	———
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.35	0.40	0.50	1.45	2.66	3.23	3.23	3.23	3.23	3.30
q3	0.00	0.01	0.02	0.10	0.22	0.15	0.00	0.00	0.00	0.04
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	3.43	3.64	3.92	4.27	4.67	5.12	6.19	7.43	8.78	10.23
q3	0.08	0.15	0.22	0.30	0.37	0.45	0.59	0.77	0.94	1.12
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	11.74	13.29	14.85	16.43	18.00	19.56	21.11	22.64	24.16	26.39
q3	1.27	1.42	1.55	1.68	1.79	1.89	1.99	2.08	2.18	2.26
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	28.58	31.46	33.59	35.69	38.47	41.89	45.28	48.63	51.93	55.19
q3	2.38	2.54	2.68	2.80	2.96	3.14	3.36	3.57	3.75	3.95
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	58.37	64.35	69.74	74.52	78.71	82.33	85.39	87.94	90.07	91.86
q3	4.09	4.17	4.15	4.03	3.84	3.59	3.26	2.90	2.58	2.30
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	93.35	94.60	95.65	96.53	97.25	98.32	99.29	99.64	99.84	99.95
q3	2.02	1.79	1.58	1.39	1.19	0.94	0.63	0.37	0.23	0.13
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2.r302.m0.88A1618/7.00/713/m98.13.20.40.1Fh.20.20.40.BlvQ-.0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

Sampel C Replikasi 2

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

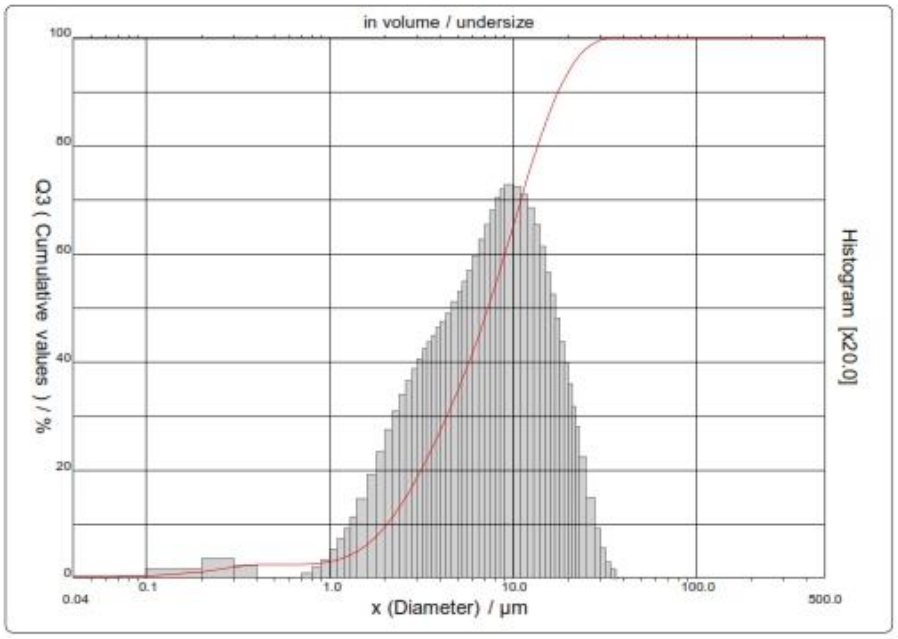
Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60 s
Sample Name	: Fitosom C1	Obscuration	: 10 %
Sample type	: Cairan	Diameter at 10%	: 2.06 µm
Comments	:	Diameter at 50%	: 7.31 µm
Liquid	:	Diameter at 90%	: 17.65 µm
Dispersing agent	:	Fraunhofer	
Operator	: BBG	Density/Factor	----------
Company	:	Specific surface	----------
Location	:	Automatic dilution	: No / No
Date : 18/10/2016	Time : 06:51:49	Meas./Rins.	: 65s/60s/4
Index meas.	: 949	SOP name	: BBG
Database name	: CilasDB1		

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.85A1818/7.00/949/m98.13.20.40.1Fh.20.20.40.Bh/Q-.0.0.0.0/r600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60 s
Sample Name	: Fitosom C1	Obscuration	: 10 %
Sample type	: Cairan	Diameter at 10%	: 2.06 µm
Comments	:	Diameter at 50%	: 7.31 µm
Liquid	:	Diameter at 90%	: 17.65 µm
Dispersing agent	:	Fraunhofer	
Operator	: BBG	Density/Factor	----------
Company	:	Specific surface	----------
Location	:	Automatic dilution	: No / No
Date : 18/10/2016	Time : 06:51:49	Meas./Rins.	: 65s/60s/4
Index meas.	: 949	SOP name	: BBG
Database name	: CilasDB1		

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.28	0.33	0.41	1.18	2.14	2.59	2.59	2.59	2.59	2.66
q3	0.00	0.01	0.02	0.08	0.17	0.11	0.00	0.00	0.00	0.04
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	2.82	3.06	3.40	3.83	4.33	4.90	6.24	7.78	9.46	11.25
q3	0.10	0.17	0.26	0.36	0.46	0.56	0.73	0.95	1.16	1.37
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	13.09	14.95	16.80	18.63	20.42	22.18	23.89	25.55	27.18	29.53
q3	1.54	1.69	1.82	1.93	2.02	2.12	2.18	2.24	2.32	2.37
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	31.79	34.71	36.83	38.90	41.59	44.86	48.04	51.13	54.14	57.06
q3	2.44	2.55	2.65	2.74	2.84	2.98	3.13	3.26	3.40	3.51
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	59.88	65.14	69.87	74.10	77.86	81.18	84.08	86.58	88.76	90.64
q3	3.60	3.64	3.62	3.54	3.42	3.26	3.06	2.82	2.62	2.40
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	92.26	93.66	94.86	95.87	96.72	98.00	99.15	99.58	99.82	99.94
q3	2.18	1.99	1.79	1.58	1.39	1.12	0.74	0.45	0.27	0.14
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/949/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Sampel C Replikasi 3

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

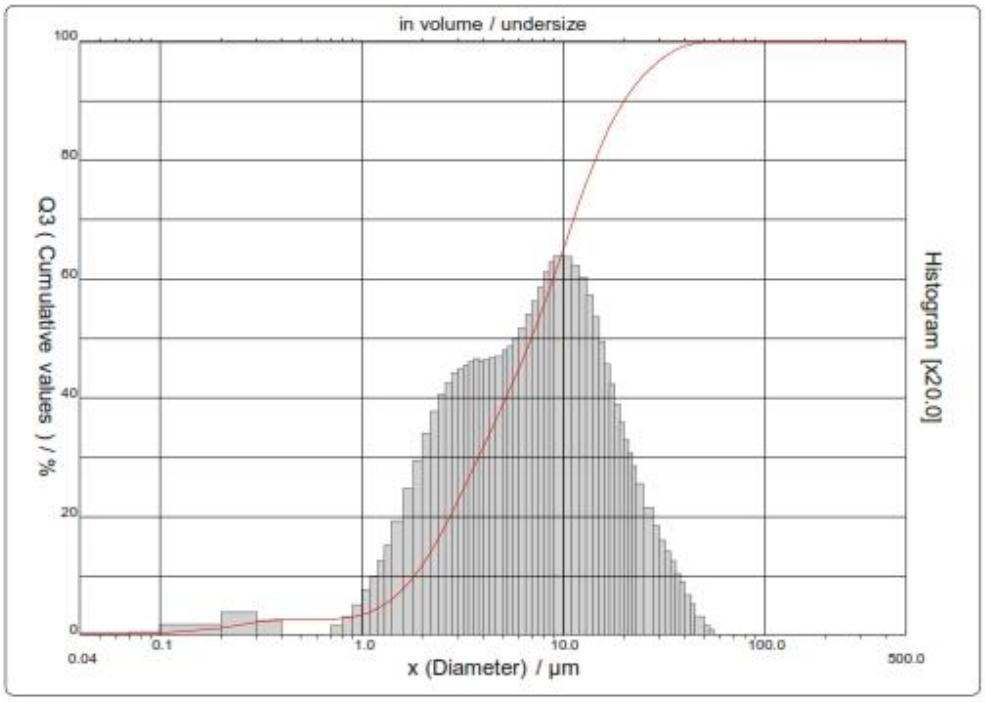
Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60	s
Sample Name	: Fitosom C2	Obscuration	: 9 %	
Sample type	: Cairan	Diameter at 10%	: 1.82	µm
Comments	:	Diameter at 50%	: 6.94	µm
Liquid	:	Diameter at 90%	: 20.11	µm
Dispersing agent	:	Fraunhofer		
Operator	: BBG	Density/Factor	----------	
Company	:	Specific surface	----------	
Location	:	Automatic dilution	: No / No	
Date : 18/10/2016	Time : 06:57:59	Meas./Rins.	: 65s/60s/4	
Index meas.	: 950	SOP name	: BBG	
Database name	: CilasDB1			

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.85A1815/7.00/950/m98.13.20.40.1Fh.20.20.40.Bh/Q-.0.0.0.0/i500.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: Fitosom C2
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 18/10/2016	Time : 06:57:59
Index meas.	: 950
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 9 %
Diameter at 10%	: 1.82 µm
Diameter at 50%	: 6.94 µm
Diameter at 90%	: 20.11 µm
Fraunhofer	
Density/Factor	----------
Specific surface	----------
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.31	0.36	0.46	1.28	2.31	2.77	2.77	2.77	2.77	2.91
q3	0.00	0.01	0.02	0.09	0.19	0.12	0.00	0.00	0.00	0.08
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	3.15	3.51	4.00	4.58	5.26	6.02	7.76	9.73	11.83	14.03
q3	0.15	0.25	0.38	0.49	0.62	0.75	0.96	1.23	1.46	1.69
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	16.26	18.46	20.60	22.67	24.64	26.51	28.30	30.01	31.62	33.90
q3	1.88	2.02	2.12	2.20	2.24	2.26	2.30	2.32	2.30	2.31
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	36.04	38.70	40.60	42.42	44.76	47.57	50.29	52.93	55.50	58.02
q3	2.33	2.34	2.39	2.43	2.49	2.58	2.69	2.81	2.92	3.05
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	60.46	65.03	69.16	72.84	76.12	79.00	81.51	83.68	85.56	87.20
q3	3.13	3.18	3.18	3.11	3.01	2.85	2.67	2.47	2.28	2.11
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	88.63	89.88	90.97	91.94	92.80	94.24	95.89	96.75	97.45	98.03
q3	1.94	1.79	1.64	1.53	1.42	1.27	1.07	0.92	0.80	0.70
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	98.51	98.89	99.20	99.53	99.69	99.91	99.97	100.00	100.00	100.00
q3	0.62	0.52	0.44	0.34	0.26	0.15	0.08	0.04	0.00	0.00
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/950/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Sampel D Replikasi 1

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

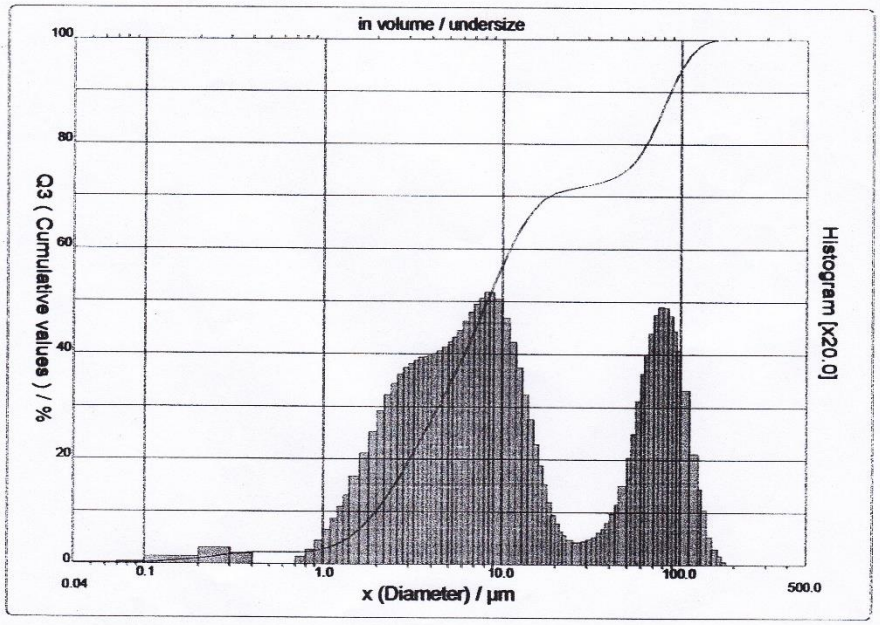
Sample ref.	: Sample_X_
Sample Name	: D
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 26/05/2016	Time : 09:05:20
Index meas.	: 716
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 17 %
Diameter at 10%	: 1.97 µm
Diameter at 50%	: 8.24 µm
Diameter at 90%	: 86.59 µm
Fraunhofer	
Density/Factor	———
Specific surface	———
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	94.65	95.63	96.06	96.46	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.88A1818/7.00/716/m98.13.20.40.1Fh.20.20.40.BlvQ- 0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_	Ultrasounds	: 60 s
Sample Name	: D	Obscuration	: 17 %
Sample type	: Cairan	Diameter at 10%	: 1.97 µm
Comments	:	Diameter at 50%	: 8.24 µm
Liquid	:	Diameter at 90%	: 86.59 µm
Dispersing agent	:	Fraunhofer	
Operator	: BBG	Density/Factor	———
Company	:	Specific surface	———
Location	:	Automatic dilution	: No / No
Date : 26/05/2016	Time : 09:05:20	Meas./Rins.	: 65s/60s/4
Index meas.	: 716	SOP name	: BBG
Database name	: CilasDB1		

Standards classes — in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.25	0.30	0.37	1.04	1.87	2.25	2.25	2.25	2.25	2.38
q3	0.00	0.01	0.01	0.07	0.15	0.09	0.00	0.00	0.00	0.07
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	2.60	2.92	3.35	3.87	4.47	5.14	6.68	8.40	10.24	12.16
q3	0.13	0.22	0.32	0.43	0.54	0.65	0.83	1.05	1.25	1.44
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	14.10	16.01	17.87	19.66	21.37	23.00	24.56	26.04	27.46	29.47
q3	1.60	1.71	1.80	1.86	1.90	1.93	1.96	1.96	1.99	1.99
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	31.37	33.76	35.47	37.12	39.25	41.82	44.29	46.66	48.93	51.11
q3	2.02	2.06	2.10	2.15	2.21	2.30	2.39	2.46	2.52	2.58
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	53.16	56.85	59.95	62.50	64.58	66.24	67.56	68.58	69.37	69.97
q3	2.57	2.51	2.33	2.10	1.86	1.61	1.37	1.13	0.93	0.75
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	70.41	70.74	71.00	71.20	71.37	71.64	71.97	72.18	72.39	72.61
q3	0.58	0.46	0.38	0.31	0.27	0.23	0.21	0.22	0.23	0.26
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	72.85	73.10	73.38	73.86	74.22	75.31	76.13	77.08	78.57	79.80
q3	0.30	0.33	0.39	0.48	0.57	0.74	1.01	1.24	1.55	1.81
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	81.09	83.32	85.13	87.33	89.39	91.27	92.94	94.39	97.00	98.61
q3	1.99	2.19	2.37	2.44	2.44	2.36	2.22	2.03	1.65	1.05
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	99.00	99.53	99.78	99.91	99.98	100.00	100.00	100.00	100.00	100.00
q3	0.71	0.51	0.26	0.14	0.08	0.03	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2.r302.m0.88A1618/7.00/716/m98.13.20.40.1Fh.20.20.40.BiVQ-.0.0.0.0/600.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

Sampel D Replikasi 2

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

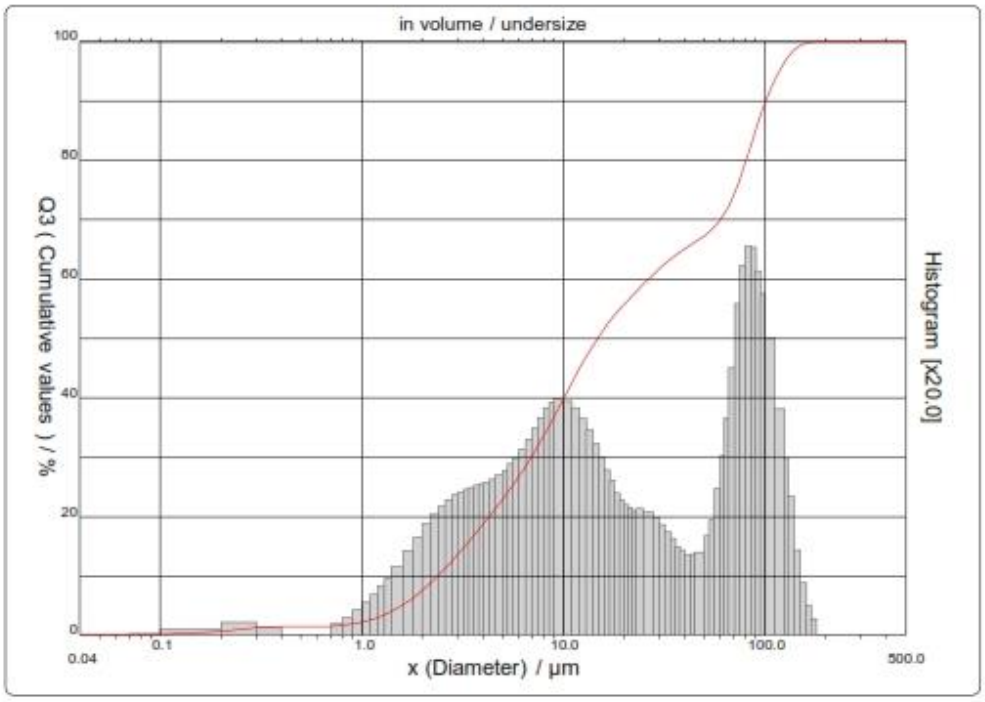
Sample ref.	: Sample_X_
Sample Name	: Fitosom D1
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 18/10/2016	Time : 07:19:01
Index meas.	: 953
Database name	: CilasDB1

Ultrasounds	: 60	s
Obscuration	: 5 %	
Diameter at 10%	: 2.39	µm
Diameter at 50%	: 14.79	µm
Diameter at 90%	: 101.41	µm
Fraunhofer		
Density/Factor	----------	
Specific surface	----------	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	89.89	91.35	92.02	92.65	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2.r302.m0.88A1815/7.00/953/m98.13.20.40.1Fh.20.20.40.Bh/Q-.0.0.0.0/i500.0.15.g10.0.9.10.1.10.P6500.1.10.N.0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: Fitosom D1
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 18/10/2016	Time : 07:19:01
Index meas.	: 953
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 5 %
Diameter at 10%	: 2.39 µm
Diameter at 50%	: 14.79 µm
Diameter at 90%	: 101.41 µm
Fraunhofer	
Density/Factor	----------
Specific surface	----------
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.20	0.22	0.26	0.72	1.33	1.56	1.56	1.56	1.56	1.73
q3	0.00	0.00	0.01	0.05	0.11	0.06	0.00	0.00	0.00	0.09
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	1.97	2.28	2.65	3.07	3.54	4.04	5.13	6.32	7.55	8.82
q3	0.14	0.21	0.27	0.34	0.41	0.47	0.57	0.71	0.82	0.93
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	10.08	11.31	12.51	13.67	14.77	15.83	16.84	17.81	18.74	20.06
q3	1.01	1.08	1.13	1.18	1.19	1.22	1.24	1.26	1.27	1.28
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	21.32	22.92	24.07	25.20	26.66	28.44	30.18	31.89	33.57	35.22
q3	1.31	1.34	1.38	1.44	1.48	1.56	1.64	1.74	1.82	1.91
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	36.81	39.80	42.47	44.84	46.92	48.74	50.32	51.69	52.89	53.95
q3	1.95	1.99	1.96	1.91	1.82	1.72	1.60	1.49	1.39	1.30
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	54.87	55.70	56.46	57.17	57.83	59.09	60.76	61.73	62.58	63.33
q3	1.19	1.13	1.09	1.07	1.04	1.06	1.03	0.98	0.92	0.87
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	63.99	64.56	65.08	65.77	66.21	67.25	67.94	68.70	69.91	70.96
q3	0.81	0.74	0.71	0.67	0.68	0.69	0.83	0.97	1.23	1.51
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	72.17	74.51	76.69	79.55	82.38	85.04	87.40	89.50	93.54	96.52
q3	1.82	2.24	2.79	3.10	3.27	3.26	3.06	2.87	2.50	1.90
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	97.35	98.58	99.28	99.68	99.89	100.00	100.00	100.00	100.00	100.00
q3	1.48	1.16	0.71	0.43	0.24	0.13	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/953/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Sampel D Replikasi 3

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

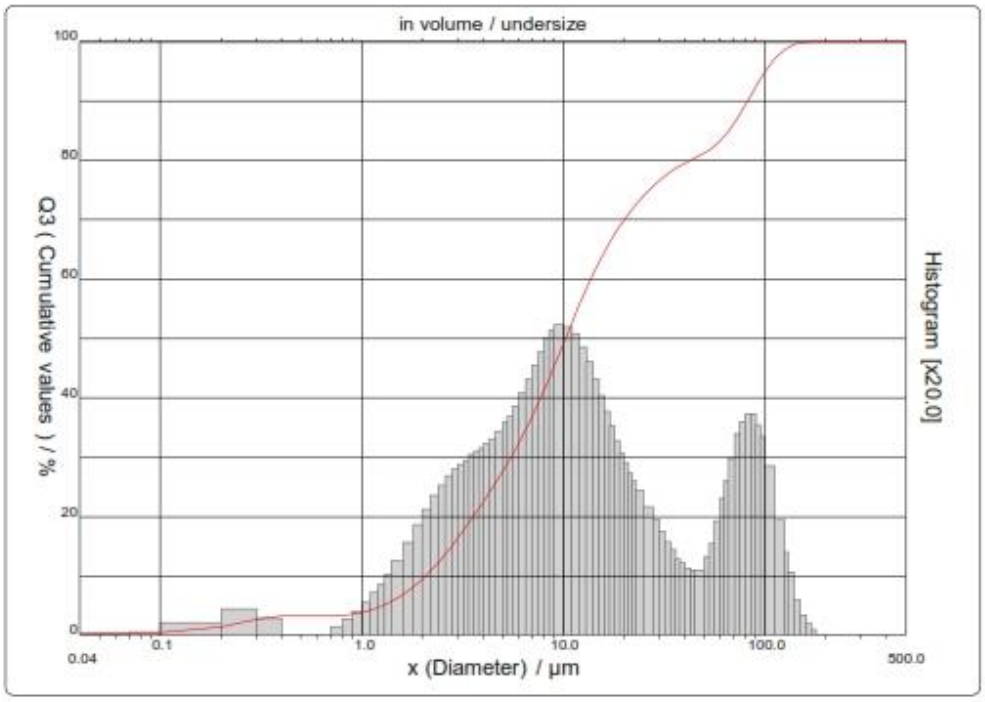
Sample ref.	: Sample_X_
Sample Name	: Fitosom D2
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 01/11/2016	Time : 09:26:10
Index meas.	: 964
Database name	: CilasDB1

Ultrasounds	: 60	s
Obscuration	: 10 %	
Diameter at 10%	: 2.07	µm
Diameter at 50%	: 10.25	µm
Diameter at 90%	: 82.32	µm
Fraunhofer		
Density/Factor	----------	
Specific surface	----------	
Automatic dilution	: No / No	
Meas./Rins.	: 65s/60s/4	
SOP name	: BBG	

Customer defined classes — in volume / undersize

x	101.0	105.0	107.0	109.0	304.0	307.0
Q3	95.06	95.88	96.25	96.59	100.00	100.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution



Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/964/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i500,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

PARTICLE SIZE DISTRIBUTION

CILAS 1090 Liquid

Range : 0.04 µm - 500.00 µm / 100 Classes

Sample ref.	: Sample_X_
Sample Name	: Fitosom D2
Sample type	: Cairan
Comments	:
Liquid	:
Dispersing agent	:
Operator	: BBG
Company	:
Location	:
Date : 01/11/2016	Time : 09:26:10
Index meas.	: 964
Database name	: CilasDB1

Ultrasounds	: 60 s
Obscuration	: 10 %
Diameter at 10%	: 2.07 µm
Diameter at 50%	: 10.25 µm
Diameter at 90%	: 82.32 µm
Fraunhofer	
Density/Factor	----------
Specific surface	----------
Automatic dilution	: No / No
Meas./Rins.	: 65s/60s/4
SOP name	: BBG

Standards classes in volume / undersize

x	0.04	0.07	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80
Q3	0.37	0.42	0.52	1.49	2.71	3.27	3.27	3.27	3.27	3.40
q3	0.00	0.01	0.02	0.10	0.22	0.14	0.00	0.00	0.00	0.07
x	0.90	1.00	1.10	1.20	1.30	1.40	1.60	1.80	2.00	2.20
Q3	3.62	3.91	4.27	4.70	5.17	5.69	6.85	8.12	9.48	10.88
q3	0.13	0.20	0.27	0.35	0.42	0.50	0.62	0.77	0.93	1.05
x	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00	4.30
Q3	12.30	13.70	15.08	16.42	17.71	18.95	20.16	21.32	22.44	24.06
q3	1.17	1.25	1.34	1.39	1.43	1.47	1.52	1.54	1.57	1.61
x	4.60	5.00	5.30	5.60	6.00	6.50	7.00	7.50	8.00	8.50
Q3	25.61	27.60	29.05	30.46	32.31	34.58	36.80	38.98	41.12	43.23
q3	1.65	1.71	1.79	1.84	1.92	2.03	2.15	2.27	2.38	2.50
x	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00
Q3	45.27	49.10	52.54	55.61	58.31	60.68	62.75	64.56	66.15	67.55
q3	2.56	2.61	2.59	2.53	2.42	2.29	2.15	2.01	1.88	1.76
x	19.00	20.00	21.00	22.00	23.00	25.00	28.00	30.00	32.00	34.00
Q3	68.78	69.87	70.85	71.73	72.53	73.94	75.64	76.57	77.35	78.01
q3	1.63	1.52	1.44	1.36	1.29	1.21	1.08	0.97	0.87	0.78
x	36.00	38.00	40.00	43.00	45.00	50.00	53.00	56.00	60.00	63.00
Q3	78.58	79.06	79.49	80.05	80.39	81.19	81.72	82.31	83.23	84.01
q3	0.72	0.64	0.60	0.56	0.54	0.54	0.65	0.77	0.96	1.15
x	66.00	71.00	75.00	80.00	85.00	90.00	95.00	100.0	112.0	125.0
Q3	84.85	86.36	87.65	89.26	90.83	92.31	93.64	94.83	97.07	98.54
q3	1.30	1.48	1.69	1.79	1.86	1.86	1.76	1.66	1.42	0.96
x	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	212.0	224.0
Q3	98.92	99.46	99.74	99.89	99.97	100.00	100.00	100.00	100.00	100.00
q3	0.70	0.52	0.29	0.17	0.09	0.04	0.00	0.00	0.00	0.00
x	240.0	250.0	280.0	300.0	315.0	355.0	400.0	425.0	450.0	500.0
Q3	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
q3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

x : diameter / µm Q3 : cumulative value / % q3 : density distribution

Serial nb : 3627 | Ref : 2,r302,m0,88A1815/7,00/964/m98,13,20,40,1Fh,20,20,40,Bh/Q-,0,0,0,0/i600,0,15,g10,0,9,10,1,10,P6500,1,10,N,0/V 9.45/635

Lampiran 4. Rata-rata ukuran partikel fitosom

Formula	Replikasi	Ukuran Partikel (µm)	
		$D_{90\%}$	Rata-rata ± Standar Deviasi
Fitosom A	1	85,92	86,5100 ± 5,4888
	2	81,34	
	3	92,27	
Fitosom B	1	16,98	14,3967 ± 2,2701
	2	13,49	
	3	12,72	
Fitosom C	1	16,97	18,2433 ± 1,6519
	2	17,65	
	3	20,11	
Fitosom D	1	86,59	90,1067 ± 10,0191
	2	101,41	
	3	82,32	

Lampiran 5. Perhitungan nilai distribusi ukuran partikel fitosom

Fitosom A

$$Nilai\ distribusi\ replikasi\ 1 = \frac{D_{90\%}R_1 - D_{10\%}R_1}{D_{50\%}R_1} = \frac{85{,}92 - 2{,}16}{10{,}85} = 7{,}7198$$

$$Nilai\ distribusi\ replikasi\ 2 = \frac{D_{90\%}R_2 - D_{10\%}R_2}{D_{50\%}R_2} = \frac{81{,}34 - 2{,}01}{8{,}82} = 8{,}9943$$

$$Nilai\ distribusi\ replikasi\ 3 = \frac{D_{90\%}R_3 - D_{10\%}R_3}{D_{50\%}R_3} = \frac{92{,}27 - 1{,}90}{9{,}51} = 9{,}5026$$

Fitosom B

$$Nilai\ distribusi\ replikasi\ 1 = \frac{D_{90\%}R_1 - D_{10\%}R_1}{D_{50\%}R_1} = \frac{16{,}98 - 2{,}23}{8{,}13} = 1{,}8143$$

$$Nilai\ distribusi\ replikasi\ 2 = \frac{D_{90\%}R_2 - D_{10\%}R_2}{D_{50\%}R_2} = \frac{13{,}49 - 1{,}44}{5{,}65} = 2{,}1327$$

$$Nilai\ distribusi\ replikasi\ 3 = \frac{D_{90\%}R_3 - D_{10\%}R_3}{D_{50\%}R_3} = \frac{12{,}72 - 1{,}31}{5{,}26} = 2{,}1692$$

Fitosom C

$$Nilai\ distribusi\ replikasi\ 1 = \frac{D_{90\%}R_1 - D_{10\%}R_1}{D_{50\%}R_1} = \frac{16{,}97 - 2{,}17}{7{,}70} = 1{,}9221$$

$$Nilai\ distribusi\ replikasi\ 2 = \frac{D_{90\%}R_2 - D_{10\%}R_2}{D_{50\%}R_2} = \frac{17{,}65 - 2{,}06}{7{,}31} = 2{,}1327$$

$$Nilai\ distribusi\ replikasi\ 3 = \frac{D_{90\%}R_3 - D_{10\%}R_3}{D_{50\%}R_3} = \frac{20{,}11 - 1{,}82}{6{,}94} = 2{,}6354$$

Fitosom D

$$Nilai\ distribusi\ replikasi\ 1 = \frac{D_{90\%}R_1 + D_{10\%}R_1}{D_{50\%}R_1} = \frac{86{,}59 + 1{,}97}{8{,}24} = 10{,}2694$$

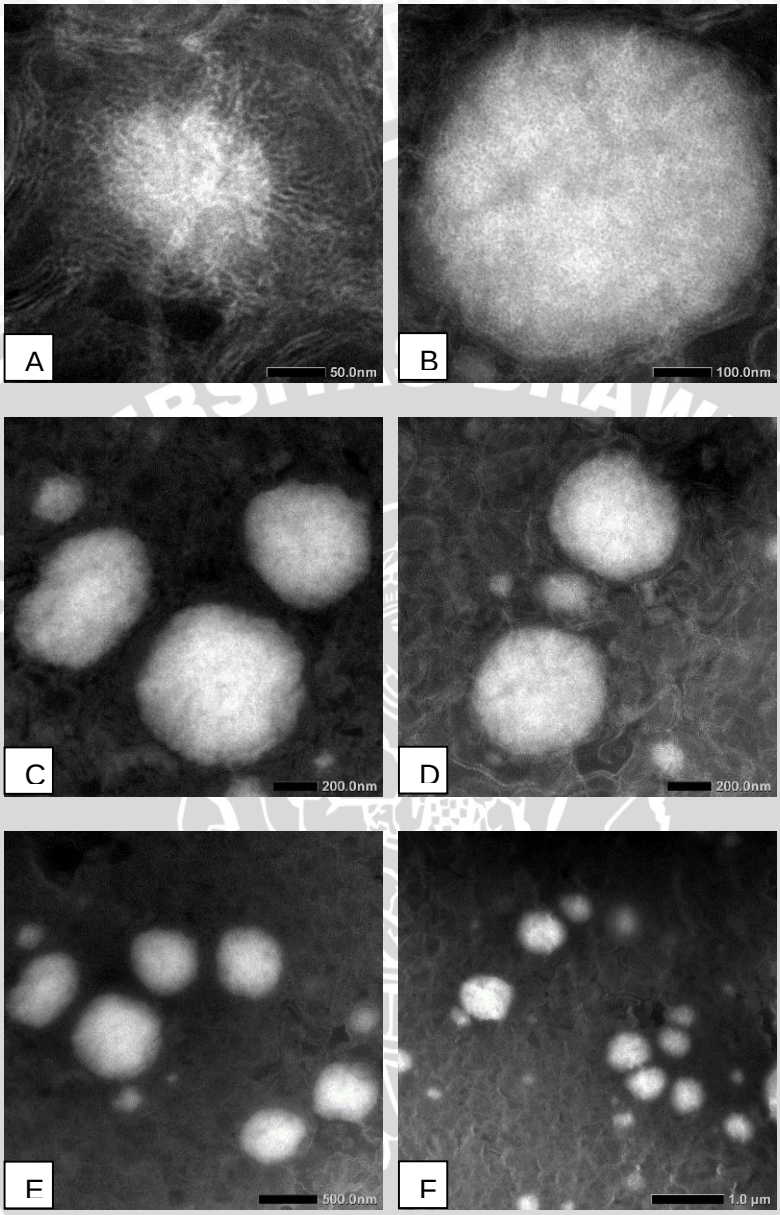
$$Nilai\ distribusi\ replikasi\ 2 = \frac{D_{90\%}R_2 + D_{10\%}R_2}{D_{50\%}R_2} = \frac{101{,}41 + 2{,}39}{14{,}79} = 6{,}6951$$

$$Nilai\ distribusi\ replikasi\ 3 = \frac{D_{90\%}R_3 + D_{10\%}R_3}{D_{50\%}R_3} = \frac{82{,}32 + 2{,}07}{10{,}25} = 7{,}8293$$

Lampiran 6. Rata-rata nilai distribusi ukuran partikel fitosom

Formula	Replikasi	Nilai Distribusi	Rata-rata ± Standar Deviasi
Fitosom A	1	7,7198	8,7389 ± 0,9184
	2	8,9943	
	3	9,5026	
Fitosom B	1	1,8143	2,0387 ± 0,1952
	2	2,1327	
	3	2,1692	
Fitosom C	1	1,9221	2,2301 ± 0,3665
	2	2,1327	
	3	2,6354	
Fitosom D	1	10,2694	8,2646 ± 1,8265
	2	6,6951	
	3	7,8293	

Lampiran 7. Data hasil uji morfologi *Transmission Electron Microscopy*



Keterangan: (A) perbesaran 80.000 kali (B) perbesaran 40.000 kali
(C) perbesaran 15.000 kali (D) perbesaran 8.000 kali
(E) perbesaran 8.000 kali (F) perbesaran 5.000 kali

Lampiran 8. Determinasi bahan ekstrak tebu (*Saccharum officinarum*)

DINAS KESEHATAN PROPINSI JAWA TIMUR
UPT MATERIA MEDICA
Jalan Lahor No.87 Telp. (0341) 593396 Batu (65313)
KOTA BATU

Nomor : 074 / 370 / 101.8 / 2016
Sifat : Biasa
Perihal : **Determinasi Tanaman Tebu**

Memenuhi permohonan saudara :

Nama : AKBAR ROZAAQ MUGNI
NIM : 135070501111032
Fakultas : FAKULTAS KEDOKTERAN
UNIVERSITAS BRAWIJAYA MALANG

1. Perihal determinasi tanaman tebu
   - Kingdom : Plantae (Tumbuhan)
   - Subkingdom : Tracheobionta (Tumbuhan berpembuluh)
   - Super Divisi : Spermatophyta (Menghasilkan biji)
   - Divisi : Magnoliophyta (Tumbuhan berbunga)
   - Kelas : Liliopsida (berkeping satu / monokotil)
   - Sub Kelas : Commelinidae
   - Ordo : Poales
   - Famili : Poaceae (suku rumput-rumputan)
   - Genus : Saccharum
   - Spesies : *Saccharum officinarum* L.
   - Nama Umum : Indonesia: Tebu; Inggris: Sugarcane, sugar cane
   - Kunci Determinasi : 1b–2b–3b–4b–6b–7b–9b–10b–11b–12b–13b–14b–16a–239a–240b–241b–242a–1b–4b–5.
2. Morfologi : Tanaman tebu mempunyai batang yang tinggi, tidak bercabang dan tumbuh tegak. Tanaman yang tumbuh baik, tinggi batangnya dapat mencapai 3-5 meter atau lebih. Pada batang terdapat lapisan lilin yang berwarna putih dan keabu-abuan. Lapisan ini banyak terdapat sewaktu batang masih muda. Ruas-ruas batang dibatasi oleh buku-buku yang merupakan tempat duduk daun. Pada ketiak daun terdapat sebuah kuncup yang biasa disebut "mata tunas". Bentuk ruas batang dan warna batang tebu yang bervariasi merupakan salah satu ciri dalam pengenalan varietas tebu. Tebu memilki daun tidak lengkap, karena hanya terdiri dari helai daun dan pelepah daun saja. Daun berkedudukan pada pangkal buku. Panjang helaian daun antara 1-2 meter, sedangakan lebar 4-7 cm, dan ujung daunnya meruncing. Pelepah tumbuh memanjang menutupi ruas. Pelepah juga melekat pada batang dengan posisi duduk berselang seling pada buku dan melindungi mata tunas.
3. Nama Simplisia : Saccharii officinarii folium et radix/ Daun dan akar tebu.
4. Kandungan : Saccharant dan vitamin B2 (riboflavin), protein, magnesium, karbohidrat, serat, gula, kalsium dan potassium.
5. Penggunaan : Penelitian
6. Daftar Pustaka

   - Anonim. http://www.plantamor.com/index.php?plant=1100, diakses tanggal 4 Desember 2010.
   - Anonim. www.warintek.ristek.go.id/tebu, diakses tanggal 1 Desember 2010.
   - Syamsuhidayat, Sri Sugati dan Johny Ria Hutapea. 1991. *Inventaris Tanaman Obat Indonesia I.* Departemen Kesehatan Republik Indonesia: Badan Penelitian dan Pengembangan Kesehatan.
   - Van Steenis, CGGJ. 2008. *FLORA*. Pradnya Paramita, Jakarta.

Demikian surat keterangan determinasi ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 20 Mei 2016
Kepala UPT Materia Medica Batu

Dr. Husin R.M., Drs., Apt., M.Kes.
NIP.19611102 199103 1 003

Lampiran 9. Surat keterangan ekstrak tebu (*Saccharum officinarum*)

DINAS KESEHATAN PROVINSI JAWA TIMUR
UPT MATERIA MEDICA
Jalan Lahor No.87 Telp. (0341) 593396 Batu (65313)
KOTA BATU

Nomor : 074 / 369 / 101.8 / 2016
Sifat : Biasa
Perihal : **Surat Keterangan Ekstrak Tanaman Tebu**

Memenuhi permohonan saudara :

Nama : AKBAR ROZAAQ MUGNI
NIM : 135070501111032
Fakultas : FAKULTAS KEDOKTERAN
UNIVERSITAS BRAWIJAYA MALANG

Kami menerangkan bahwa yang bersangkutan telah melakukan ekstraksi untuk bahan penelitian dari tanaman tebu (*Saccharum officinarum* L.). Adapun proses pembuatan dilakukan di Laboratorium Fitokimia UPT Materia Medica Batu dengan perincian sebagai berikut:

BAHAN : Serbuk daun dan akar tebu
Etanol 50 %
Kertas saring

ALAT : Toples bertutup — Erlenmeyer
Corong gelas — Rotary evaporator
Timbangan analitik — Beaker glass
Gelas ukur — Alkoholmeter
Botol — Shaker digital

Cara Kerja :

1. Timbang serbuk daun dan akar tebu sebanyak 800 gram.
2. Lakukan pembasahan dengan pelarut etanol 50% sebanyak 2 L.
3. Masukkan serbuk yang telah dibasahi dengan pelarut ke dalam toples, diratakan dan sambil ditambahkan pelarut etanol 50% sampai terendam (pelarut yang digunakan minimal 2 kali berat atau lebih. Pelarut yang ditambahkan sebanyak 2 L. Tutup toples dengan rapat selama 24 jam. Dan dishaker di atas shaker digital rpm 50.
4. Saring ekstrak cair dengan penyaring kain. Tampung ekstrak dalam Erlenmeyer.
5. Ampas dimasukkan lagi dalam toples dan tambahkan pelarut sampai terendam (minimal pelarut 5 cm di atas permukaan), dalam hal ini digunakan 4 L.
6. Biarkan semalam/ 24 jam dan dishaker.
7. Remaserasi dilakukan sebanyak sampai filtrat/ ekstrak lebih jernih, menggunakan 3,6 L pelarut.
8. Hasil ekstrak cair pertama sampai dengan terakhir, dijadikan satu dan diuapkan dengan menggunakan rotary evaporator. Diperlukan waktu 4 jam untuk evaporasi.
9. Ekstrak yang dihasilkan dievaporasi / diuapkan diatas water bath selama 2 jam.

Hasil :

1. Dari **800 gram serbuk daun dan akar tebu** dan diekstraksi menggunakan pelarut etanol 50% sebanyak **11,6 L** dihasilkan ekstrak cairan kental sebanyak **1750 ml**.

Demikian keterangan ini kami buat untuk dipergunakan sebagaimana mestinya.

Batu, 20 Mei 2016
Kepala UPT Materia Medica Batu

Drs. Husin R.M., Drs., Apt., M.Kes.
NIP 196111021991031003

Lampiran 10. Hasil uji statistik

Uji normalitas data $D_{90\%}$

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
Diameter	formula A	,209	3	.	,991	3	,822
	formula B	,322	3	.	,880	3	,325
	formula C	,307	3	.	,903	3	,396
	formula D	,304	3	.	,908	3	,410

a. Lilliefors Significance Correction

Uji homogenitas data $D_{90\%}$

Test of Homogeneity of Variances

Diameter

Levene Statistic	df1	df2	Sig.
4,049	3	8	,050

Transformasi data $D_{90\%}$ dengan Log10

Formula	Replikasi	$D_{90\%}$	Log10 $D_{90\%}$
Fitosom A	1	85,92	1,93
	2	81,34	1,91
	3	92,27	1,97
Fitosom B	1	16,98	1,23
	2	13,49	1,10
	3	12,72	1,13
Fitosom C	1	16,97	1,23
	2	17,65	1,25
	3	20,11	1,30
Fitosom D	1	86,59	1,94
	2	101,41	2,01
	3	82,32	1,92

Uji normalitas data Log10 $D_{90\%}$

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Formula	Statistic	df	Sig.	Statistic	df	Sig.
D1	formula A	,201	3	.	,994	3	,856
	formula B	,312	3	.	,895	3	,370
	formula C	,301	3	.	,912	3	,426
	formula D	,296	3	.	,919	3	,448

a. Lilliefors Significance Correction

Uji homogenitas data Log10 $D_{90\%}$

Test of Homogeneity of Variances

D1

Levene Statistic	df1	df2	Sig.
1,422	3	8	,306

Uji one-way anova data Log10 $D_{90\%}$

ANOVA

D1

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,648	3	,549	247,701	,000
Within Groups	,018	8	,002		
Total	1,666	11			

Uji post-hoc tuckey data Log10 $D_{90\%}$

Multiple Comparisons

Dependent Variable: D1
Tukey HSD

(I) Formula	(J) Formula	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
formula A	formula B	,78167*	,03845	,000	,6585	,9048
	formula C	,67654*	,03845	,000	,5534	,7997
	formula D	-,01653	,03845	,972	-,1397	,1066
formula B	formula A	-,78167*	,03845	,000	-,9048	-,6585
	formula C	-,10513	,03845	,097	-,2283	,0180
	formula D	-,79821*	,03845	,000	-,9213	-,6751
formula C	formula A	-,67654*	,03845	,000	-,7997	-,5534
	formula B	,10513	,03845	,097	-,0180	,2283
	formula D	-,69307*	,03845	,000	-,8162	-,5699
formula D	formula A	,01653	,03845	,972	-,1066	,1397
	formula B	,79821*	,03845	,000	,6751	,9213
	formula C	,69307*	,03845	,000	,5699	,8162

*. The mean difference is significant at the 0.05 level.

D1

Tukey HSD[a]

Formula	N	Subset for alpha = 0.05	
		1	2
formula B	3	1,1548	
formula C	3	1,2599	
formula A	3		1,9365
formula D	3		1,9530
Sig.		,097	,972

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 3,000.