MagRay 1000 S/N ratio Exp. Method

1. 사용장비

    1) MagRay 1000 (Nano Magnetic Particle Analyzer Controller)

    Serial No. : 58YV-25OG-A03R-71ES

    2) Measurement Head

    Serial No. : AU7R-B7QV-H0CD-122N

2. S/W setting condition

    1) Low Frequency

	source	reference
Freq.	1000	1000
phase	0	0
Gain	0.4	0.1
Gain(V)	0.6	0.1

    2) High Frequency

	source	reference
Freq.	65000	65000
phase	0	0
Gain	0.6	0.1
Gain(V)	0.4	0.1

    3) Interval : 100 mS

    4) Sampling rate : 2 MSa/S

3. 실험에 사용된 nano magnetic particle

    Chemicell /fluidMAG-UC/C /25mg/ml /100nm /autoclaved

4. 실험 방법

1) NMP Conc. 10% sample을 준비한다. (NMP 10㎕ + H2O 90㎕ + mineral oil 20㎕)

2) 시료를 measurement head에 넣고 S/N ratio = 2인 위치를 측정한다.

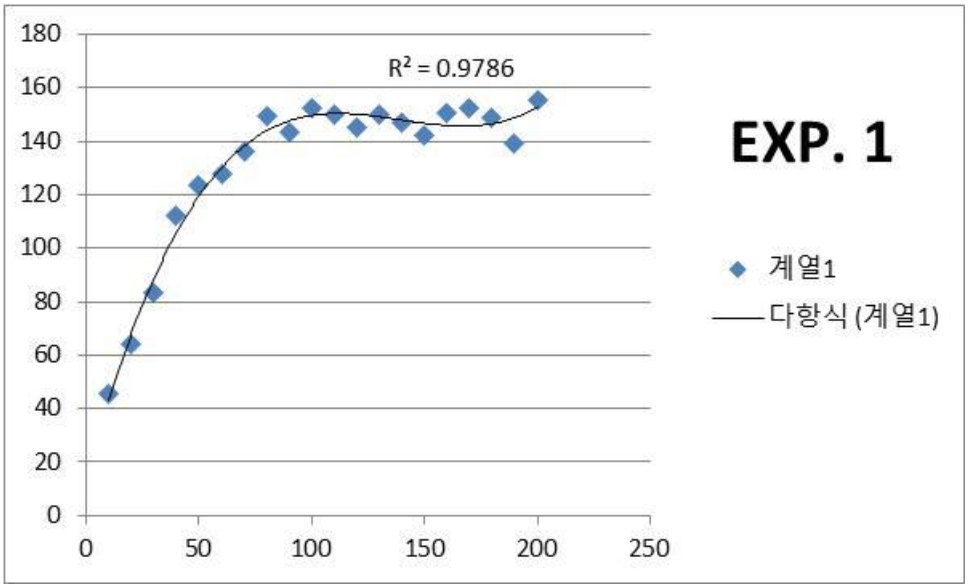
3) NMP 10㎕ ~ 200㎕까지 10㎕간격으로 sample을 준비한다.

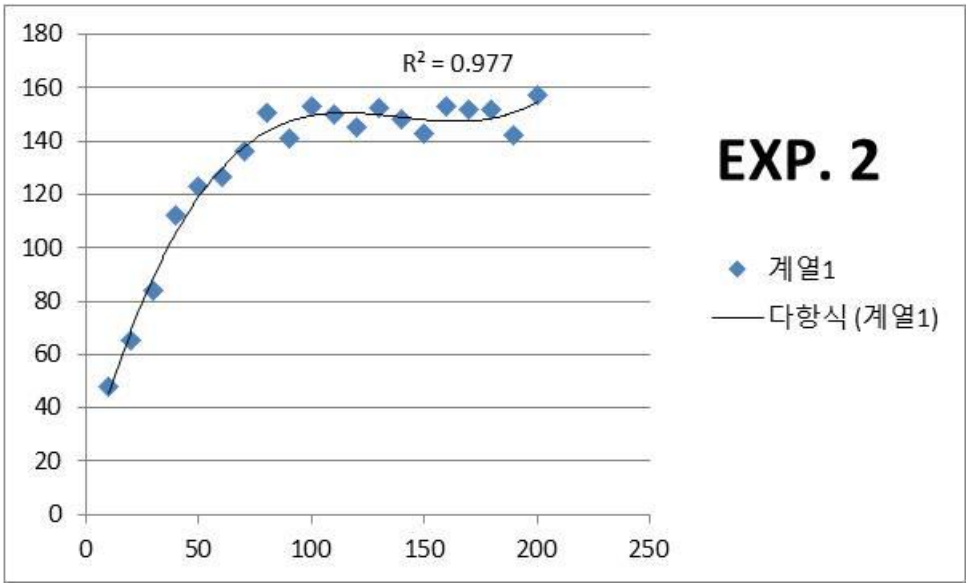
4) 준비된 sample을 2)에서 측정한 위치에 차례로 삽입하여 값을 측정한다.

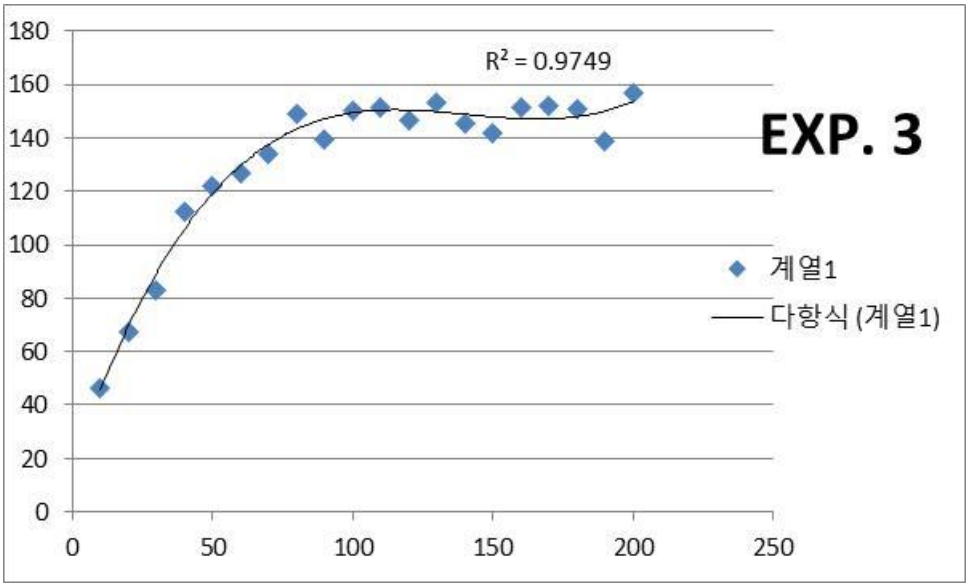
5) 같은 측정을 3번 반복하여 측정한다.

5. 측정 결과

NMP(㎕)	1	2	3
10	45.5	48	46.7
20	64.4	65.2	67.8
30	83.5	83.8	83.8
40	112.1	112.2	113.1
50	123.5	122.8	122.3
60	127.6	126.6	127.2
70	136.2	136.1	134.8
80	149.5	150.3	149.7
90	143.2	140.9	139.7
100	152.2	153	150.9
110	150	149.7	151.8
120	144.9	145.3	147
130	150.2	152.6	153.7
140	147.2	148.2	146.2
150	142.1	142.5	142.6
160	150.6	152.7	151.7
170	152.6	151.8	152.6
180	149	151.5	151.3
190	139.1	142	139.6
200	155.6	157.3	157.2


180
160
140
120
100
80
60
40
20
0
0
50
100
150
200
250
R² = 0.9786
EXP. 1
계열1
다항식 (계열1)


180
160
140
120
100
80
60
40
20
0
0
50
100
150
200
250
R² = 0.977
EXP. 2
계열1
다항식 (계열1)


180
160
140
120
100
80
60
40
20
0
0
50
100
150
200
250
R² = 0.9749
EXP. 3
계열1
다항식 (계열1)