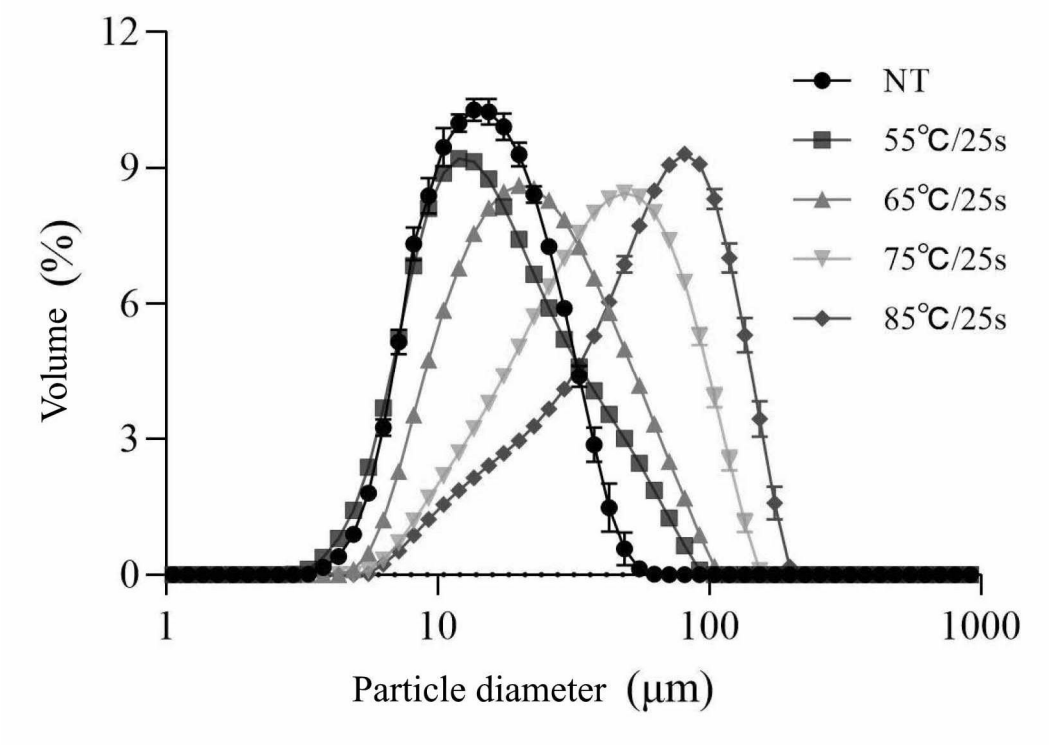

12
9
6
3
0
Volume (%)
1
10
100
1000
Particle diameter (μm)
NT
55℃/25s
65℃/25s
75℃/25s
85℃/25s

FIG.1

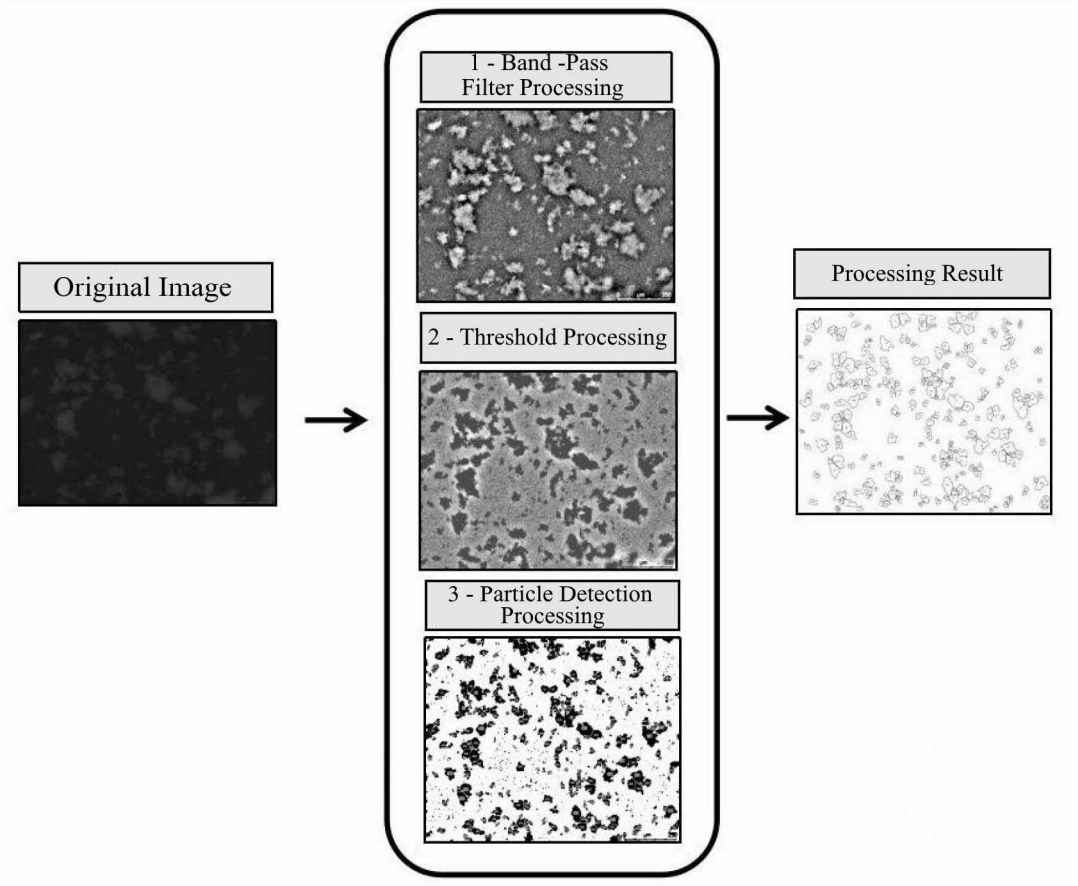
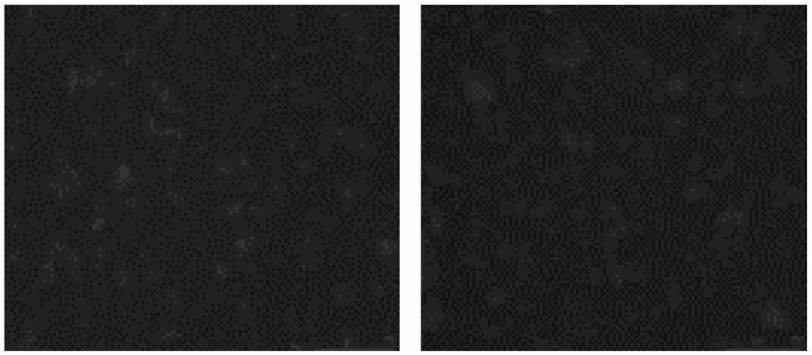

Original Image
1 - Band -Pass Filter Processing
2 - Threshold Processing
3 - Particle Detection Processing
Processing Result

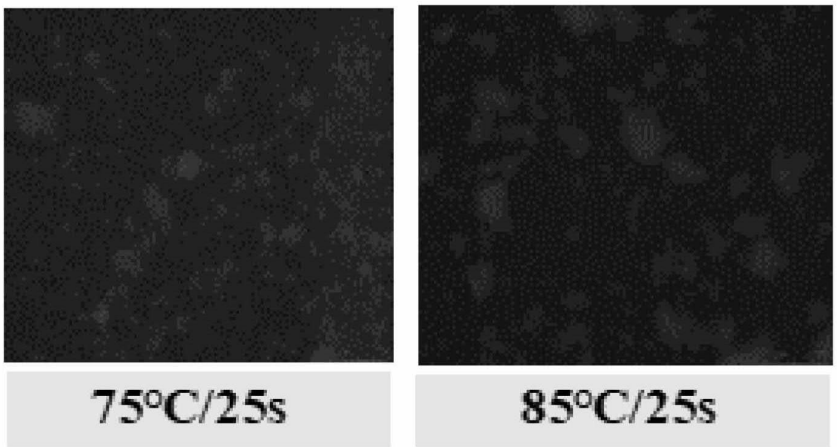
FIG.2



（A）



（B）



（C）

FIG.3

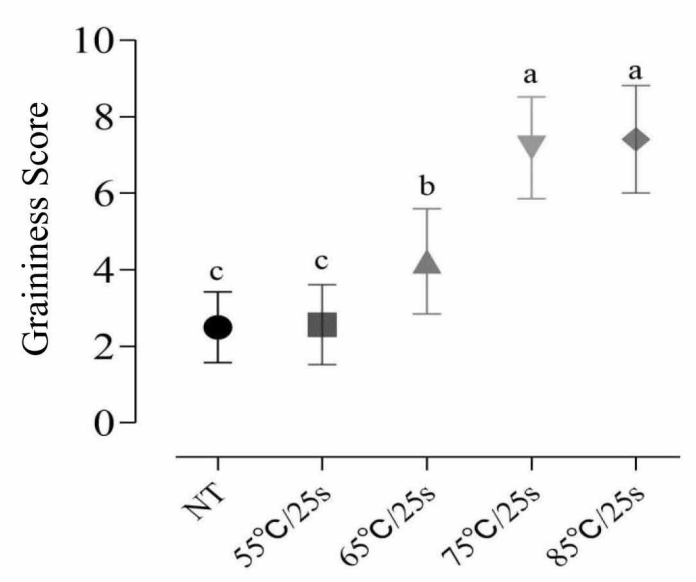
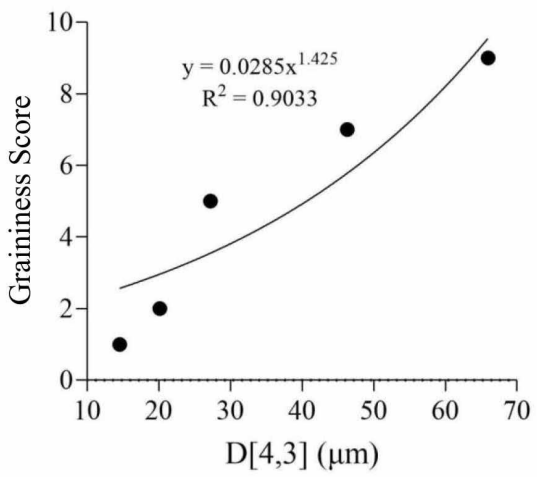
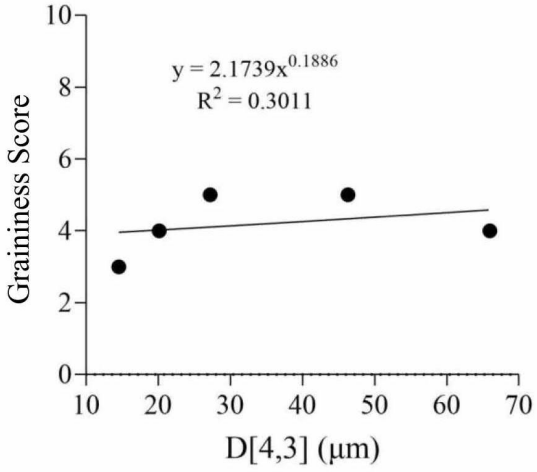

Graininess Score
10
8
6
4
2
0
a
a
b
c
c
NT
55°C/25s
65°C/25s
75°C/25s
85°C/25s

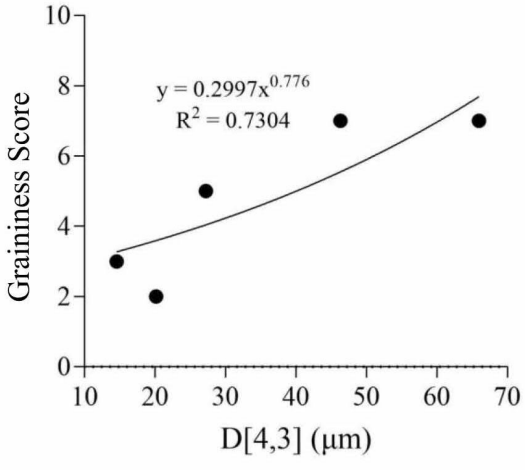
FIG.4


y = 0.0285x^1.425
R^2 = 0.9033
Graininess Score
D[4,3] (μm)

（A）

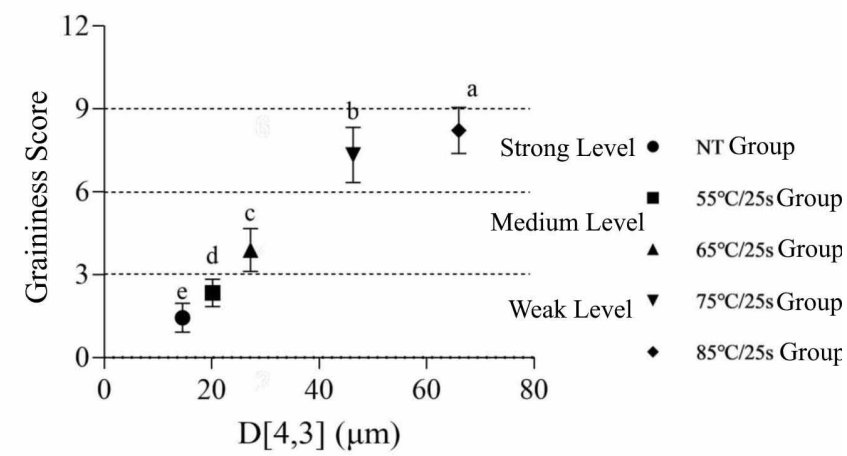

y = 2.1739x^0.1886
R^2 = 0.3011
Graininess Score
D[4,3] (μm)

（B）

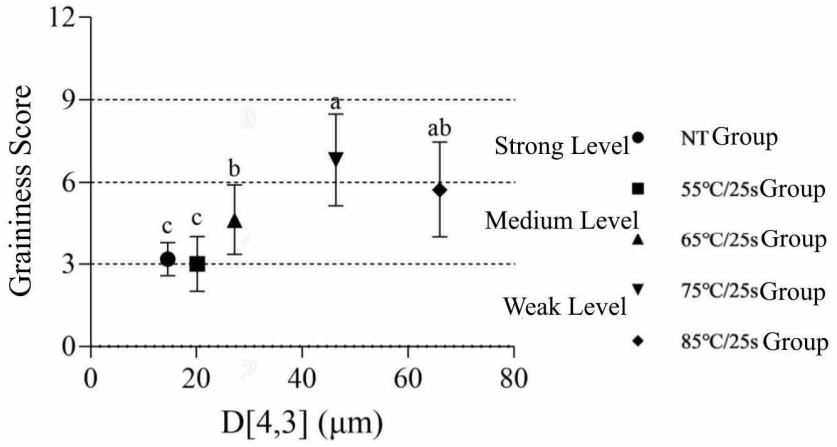

y = 0.2997x^0.776
R^2 = 0.7304
Graininess Score
D[4,3] (μm)

（C）

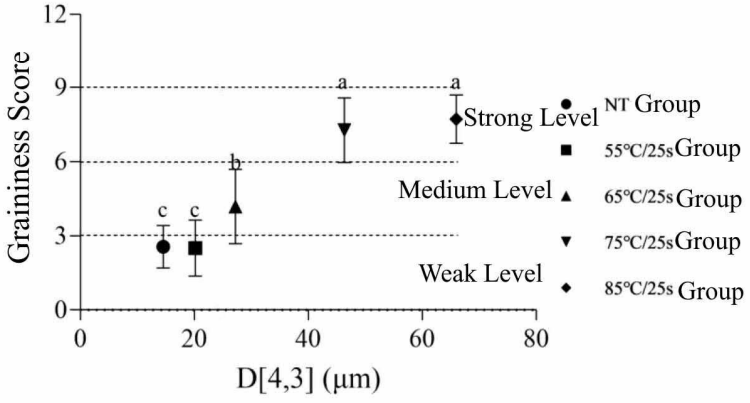
FIG.5


Graininess Score
12
9
6
3
0
0
20
40
60
80
D[4,3] (μm)
a
b
c
d
e
Strong Level
Medium Level
Weak Level
NT Group
55℃/25s Group
65℃/25s Group
75℃/25s Group
85℃/25s Group

（A）

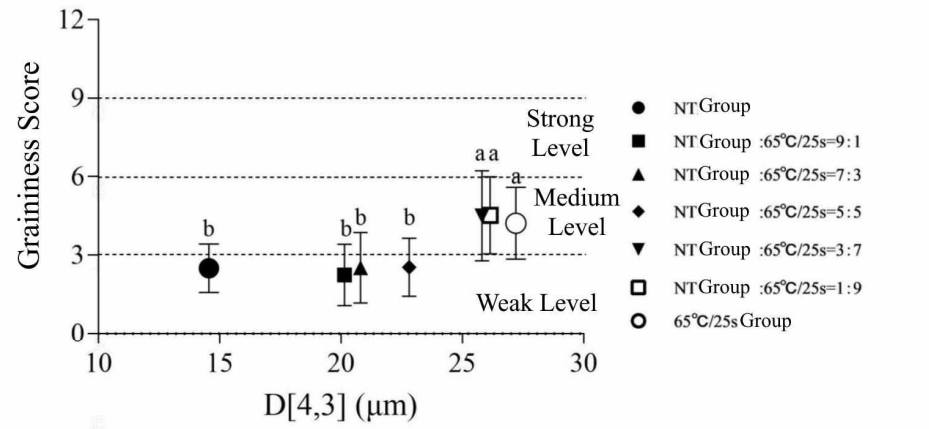

Graininess Score
12
9
6
3
0
0
20
40
60
80
D[4,3] (μm)
a
ab
b
c
c
Strong Level
Medium Level
Weak Level
NT Group
55℃/25s Group
65℃/25s Group
75℃/25s Group
85℃/25s Group

（B）

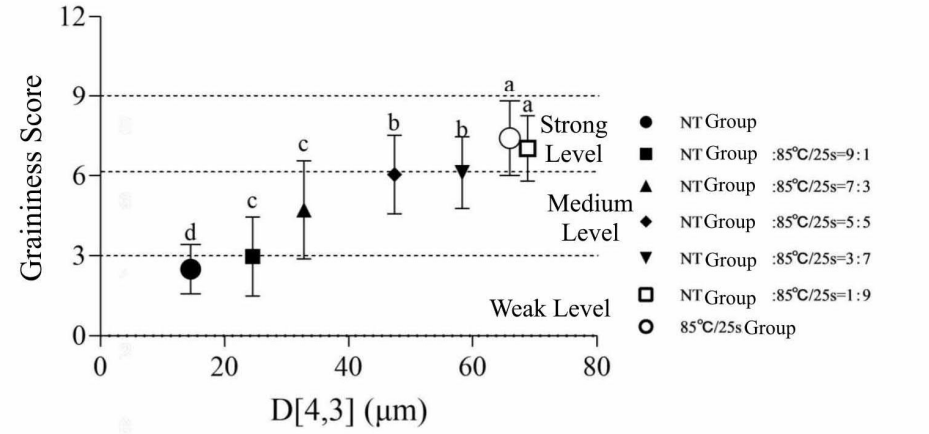

Graininess Score
12
9
6
3
0
0
20
40
60
80
D[4,3] (μm)
a
a
b
c
c
Strong Level
Medium Level
Weak Level
NT Group
55℃/25s Group
65℃/25s Group
75℃/25s Group
85℃/25s Group

（C）

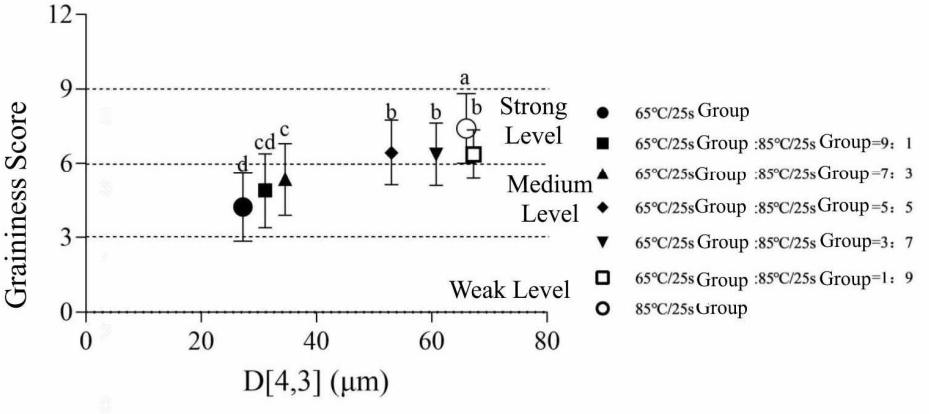
FIG.6


Graininess Score
D[4,3] (μm)
Strong Level
Medium Level
Weak Level
NT Group
NT Group :65℃/25s=9:1
NT Group :65℃/25s=7:3
NT Group :65℃/25s=5:5
NT Group :65℃/25s=3:7
NT Group :65℃/25s=1:9
65℃/25s Group

（A）


Graininess Score
D[4,3] (μm)
Strong Level
Medium Level
Weak Level
NT Group
NT Group :85℃/25s=9:1
NT Group :85℃/25s=7:3
NT Group :85℃/25s=5:5
NT Group :85℃/25s=3:7
NT Group :85℃/25s=1:9
85℃/25s Group

（B）


Graininess Score
D[4,3] (μm)
Strong Level
Medium Level
Weak Level
65℃/25s Group
65℃/25s Group :85℃/25s Group=9: 1
65℃/25s Group :85℃/25s Group=7: 3
65℃/25s Group :85℃/25s Group=5: 5
65℃/25s Group :85℃/25s Group=3: 7
65℃/25s Group :85℃/25s Group=1: 9
85℃/25s Group

（C）

FIG.7