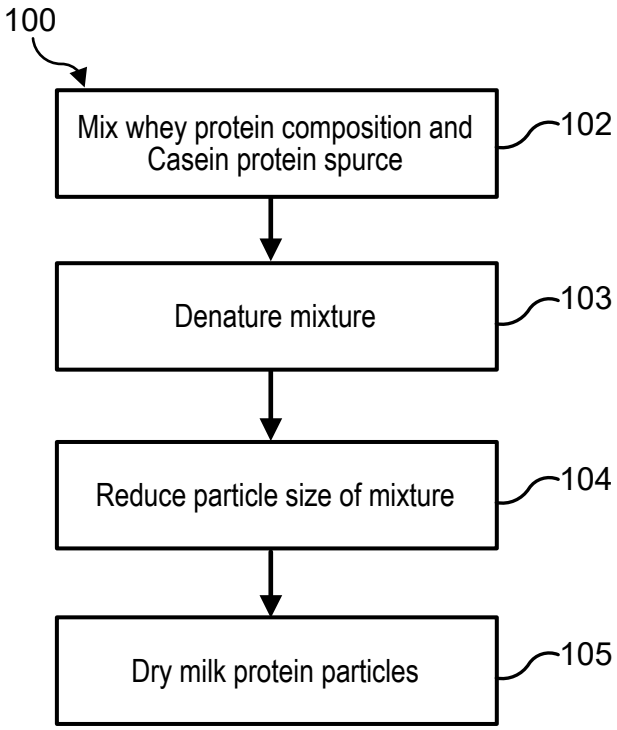

100
Mix whey protein composition and Casein protein spurce
102
Denature mixture
103
Reduce particle size of mixture
104
Dry milk protein particles
105

FIG. 1

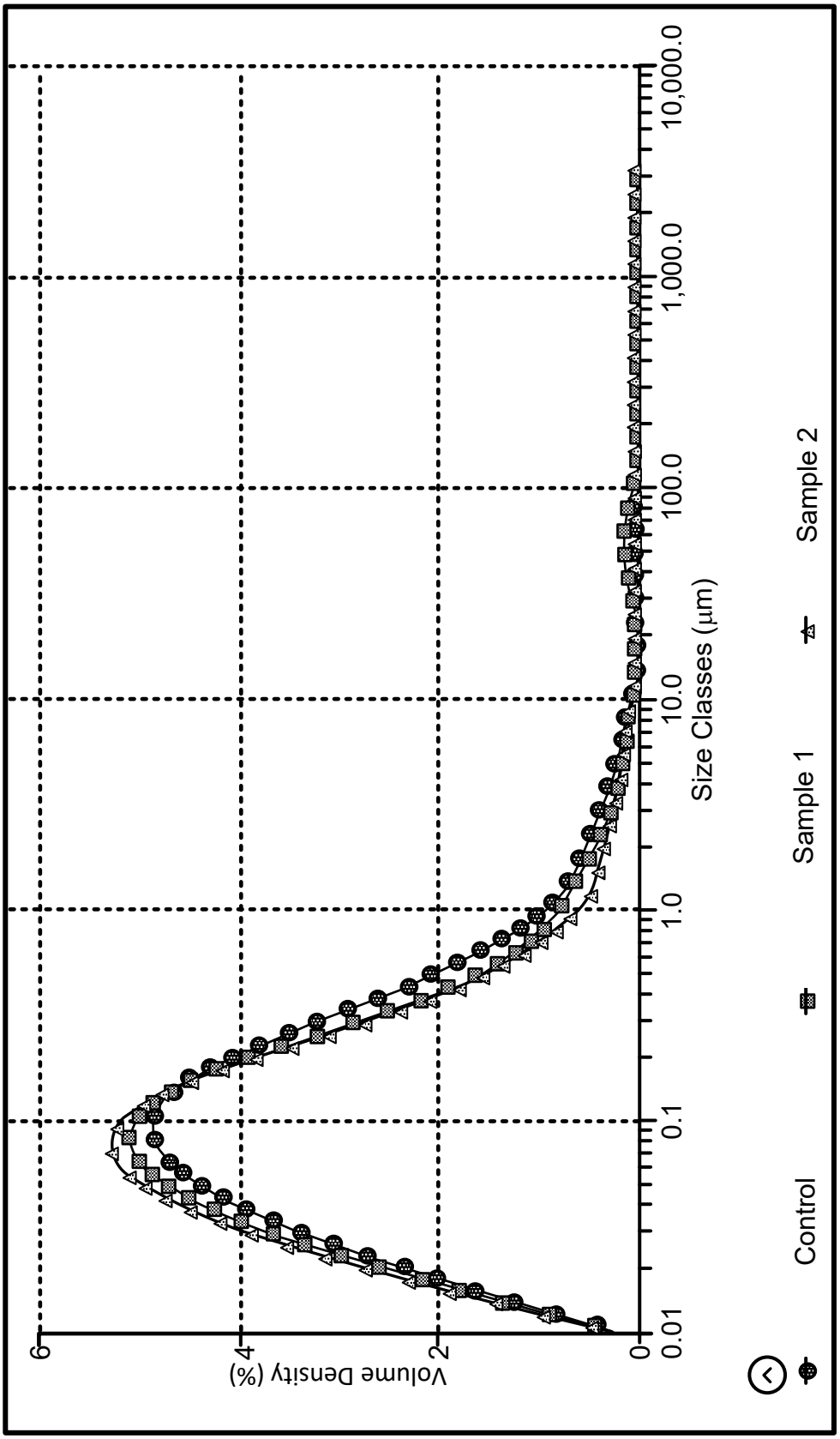

Volume Density (%)
0
2
4
6
0.01
0.1
1.0
10.0
100.0
1,000.0
10,000.0
Size Classes (µm)
Control
Sample 1
Sample 2

FIG. 2A

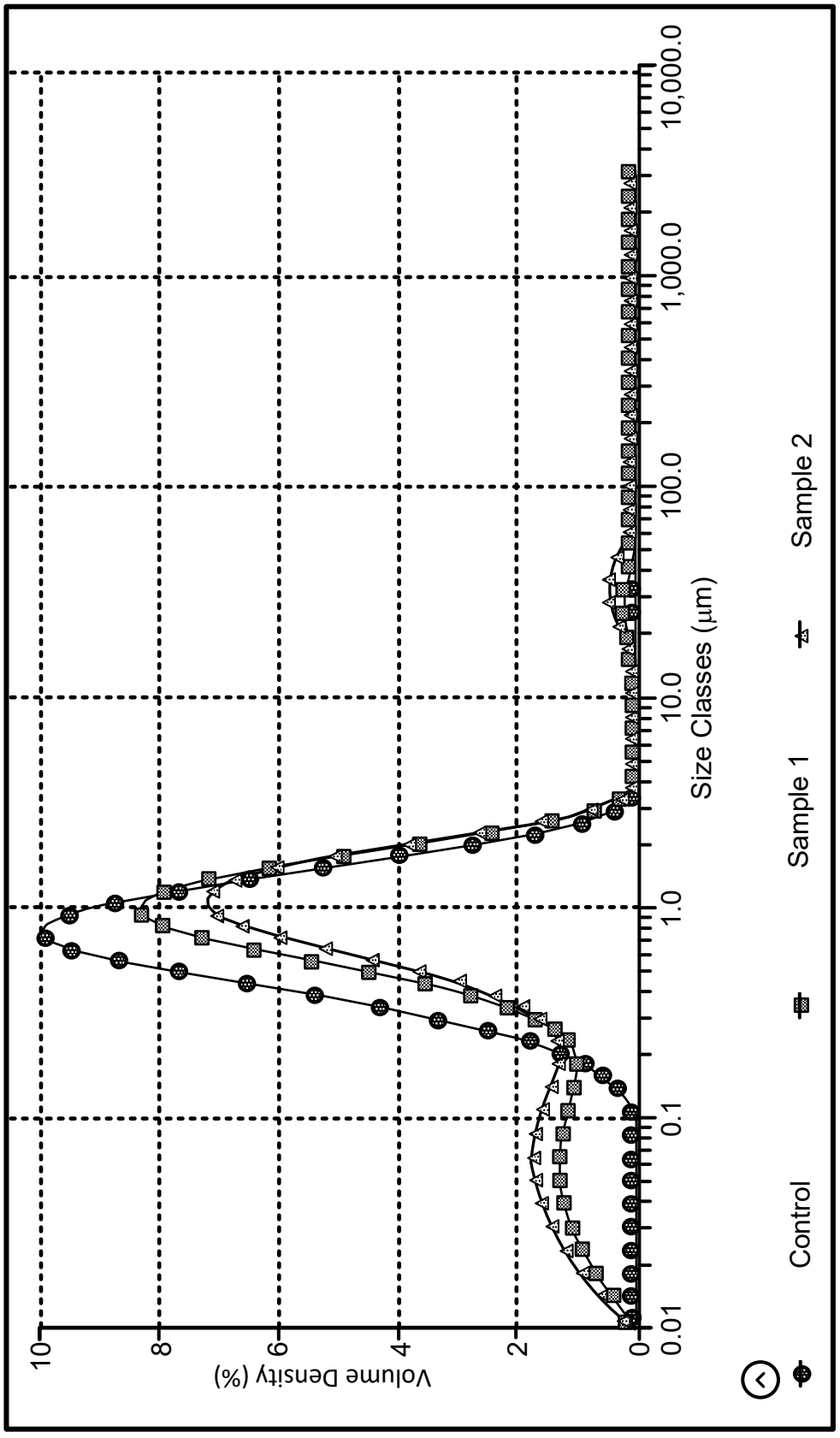

Volume Density (%)
0
2
4
6
8
10
0.01
0.1
1.0
10.0
100.0
1,000.0
10,000.0
Size Classes (μm)
Control
Sample 1
Sample 2

FIG. 2B

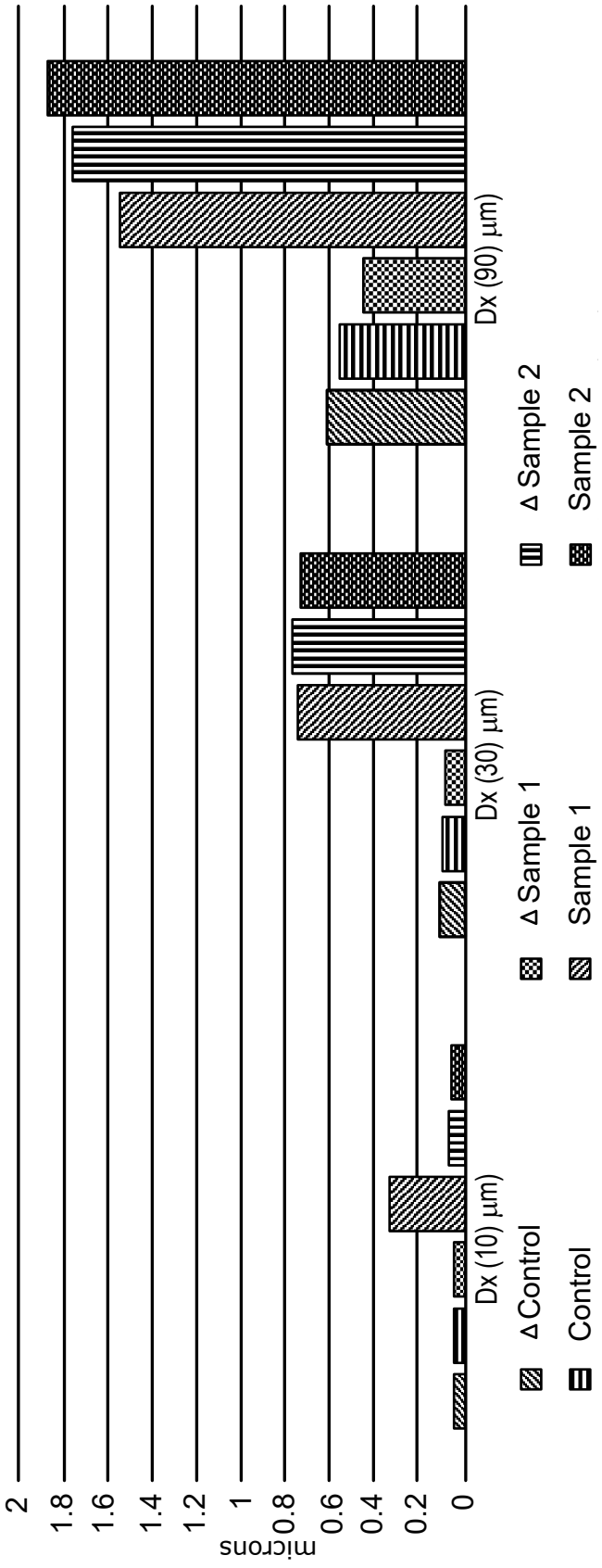

2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
microns
Dx (10) µm)
Dx (30) µm)
Dx (90) µm)
Control
Δ Control
Sample 1
Δ Sample 1
Sample 2
Δ Sample 2

FIG. 2C

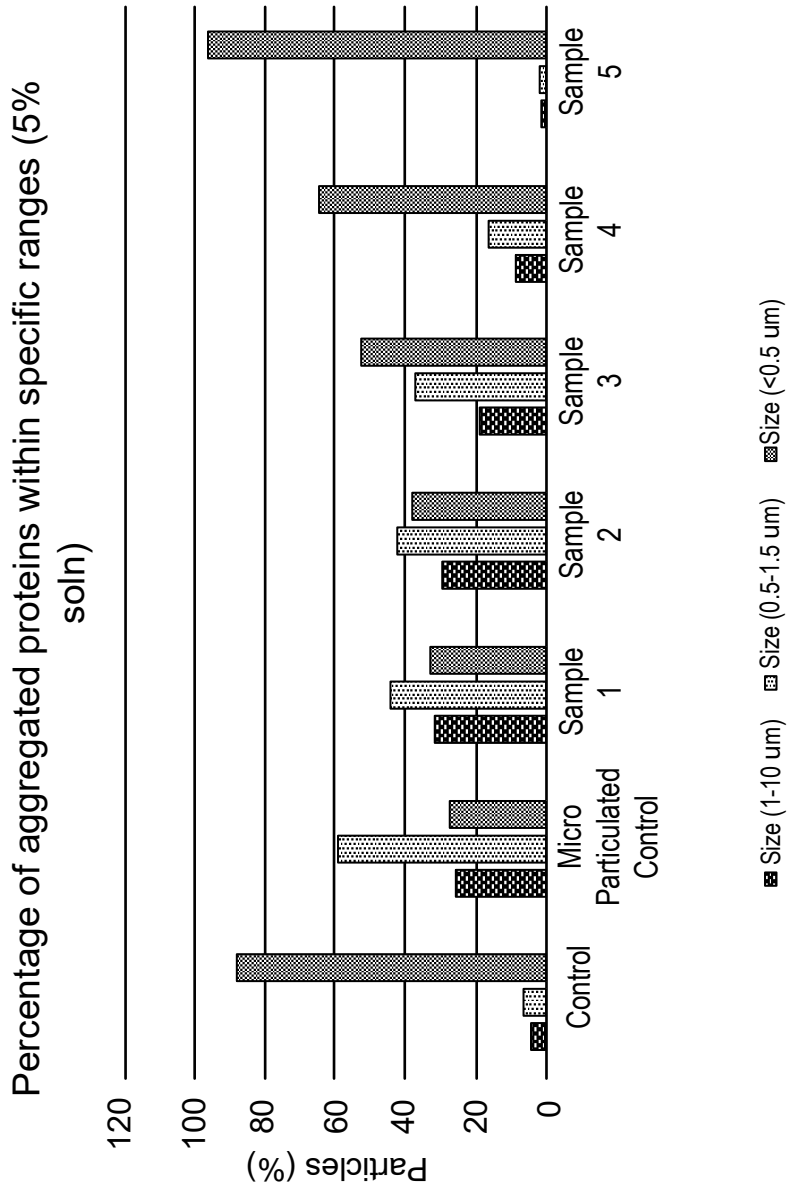

Percentage of aggregated proteins within specific ranges (5% soln)
Particles (%)
120
100
80
60
40
20
0
Control
Micro Particulated Control
Sample 1
Sample 2
Sample 3
Sample 4
Sample 5
Size (1-10 um)
Size (0.5-1.5 um)
Size (<0.5 um)

FIG. 3

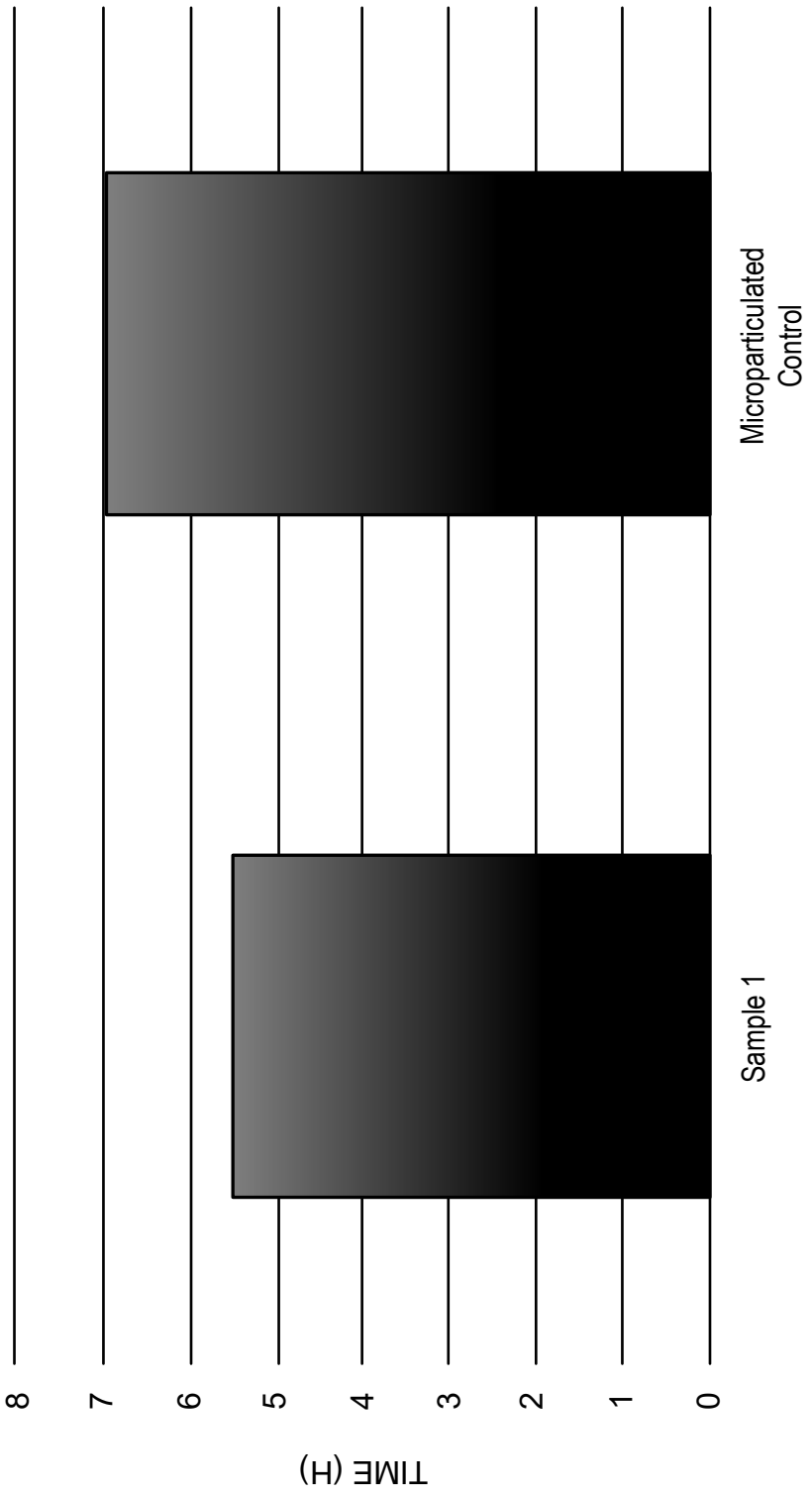


FIG. 4

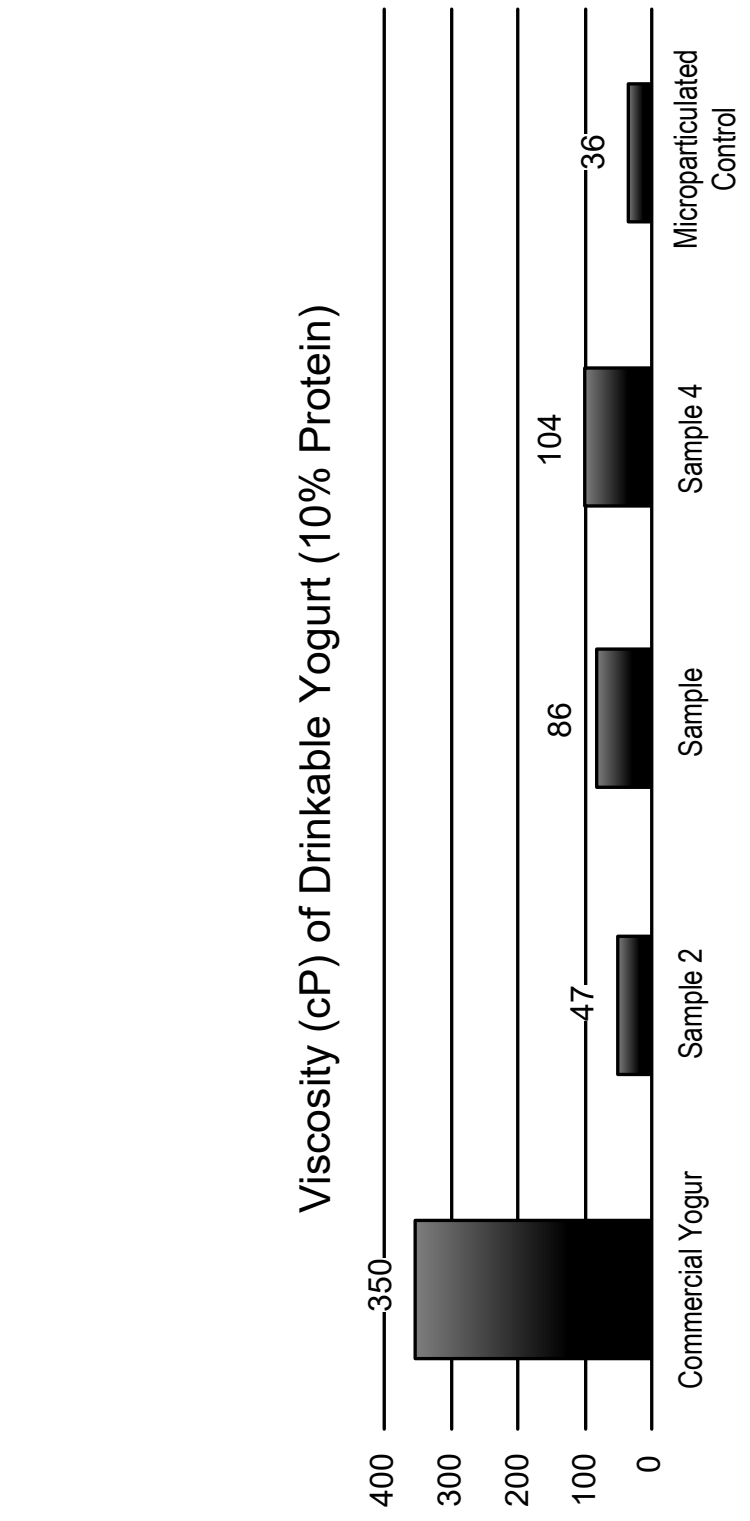

Viscosity (cP) of Drinkable Yogurt (10% Protein)
400
300
200
100
0
350
47
86
104
36
Commercial Yogur
Sample 2
Sample
Sample 4
Microparticulated Control

FIG. 5

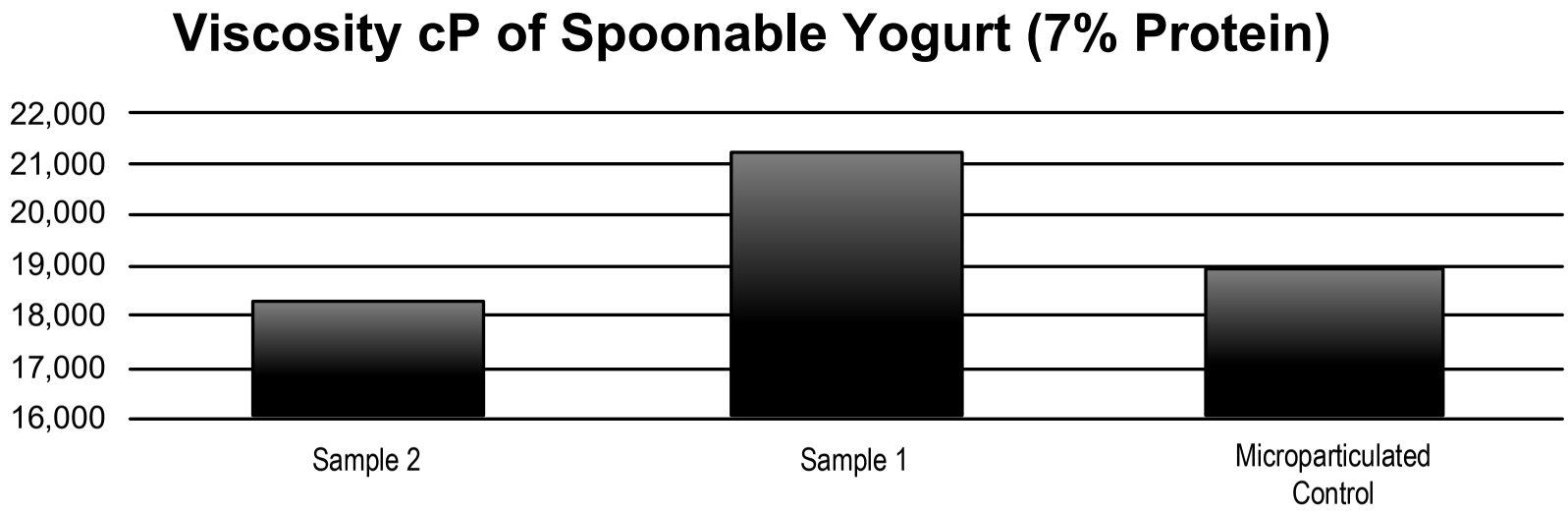

Viscosity cP of Spoonable Yogurt (7% Protein)
22,000
21,000
20,000
19,000
18,000
17,000
16,000
Sample 2
Sample 1
Microparticulated Control

FIG. 6

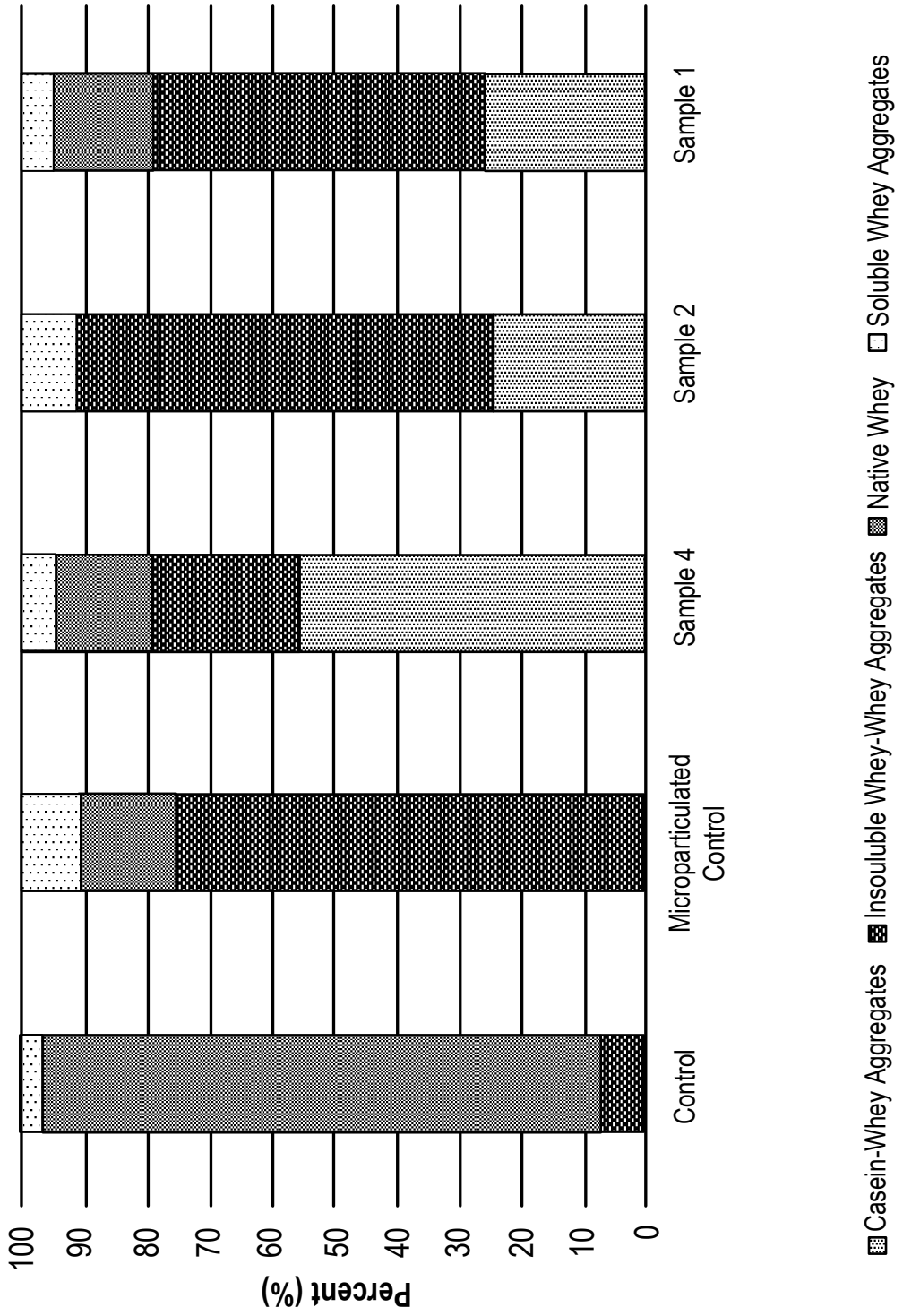

Percent (%)
100
90
80
70
60
50
40
30
20
10
0
Control
Microparticulated Control
Sample 4
Sample 2
Sample 1
Casein-Whey Aggregates
Insoluble Whey-Whey Aggregates
Native Whey
Soluble Whey Aggregates

FIG. 7

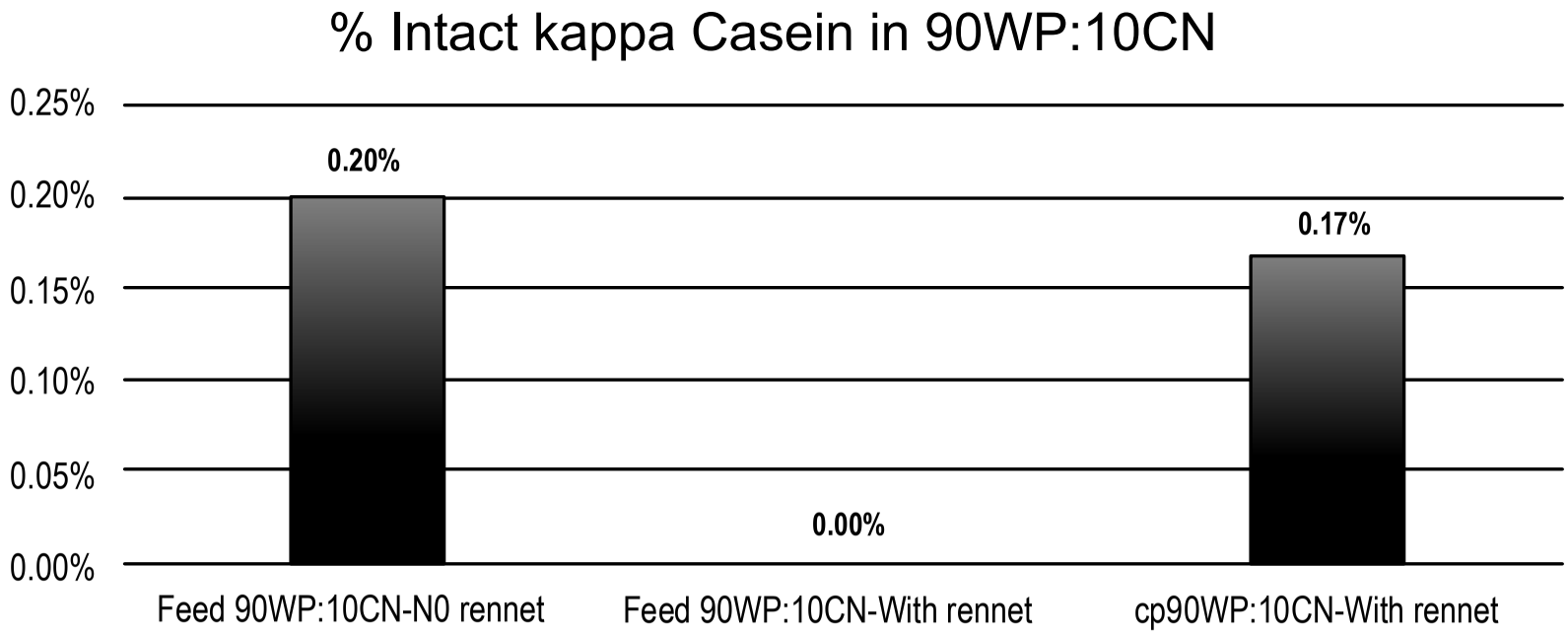

% Intact kappa Casein in 90WP:10CN
0.25%
0.20%
0.15%
0.10%
0.05%
0.00%
0.20%
0.00%
0.17%
Feed 90WP:10CN-N0 rennet
Feed 90WP:10CN-With rennet
cp90WP:10CN-With rennet

FIG. 8A

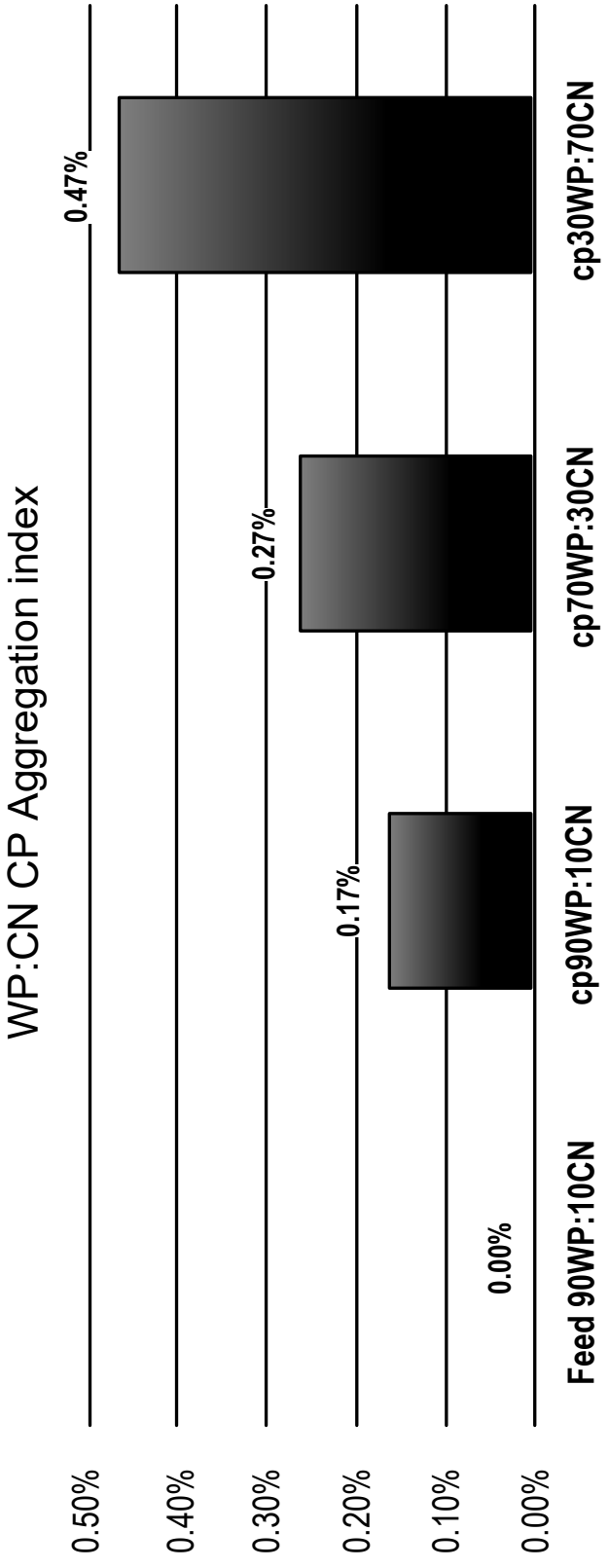

WP:CN CP Aggregation index
0.50%
0.40%
0.30%
0.20%
0.10%
0.00%
0.47%
0.27%
0.17%
0.00%
Feed 90WP:10CN
cp90WP:10CN
cp70WP:30CN
cp30WP:70CN

FIG. 8B