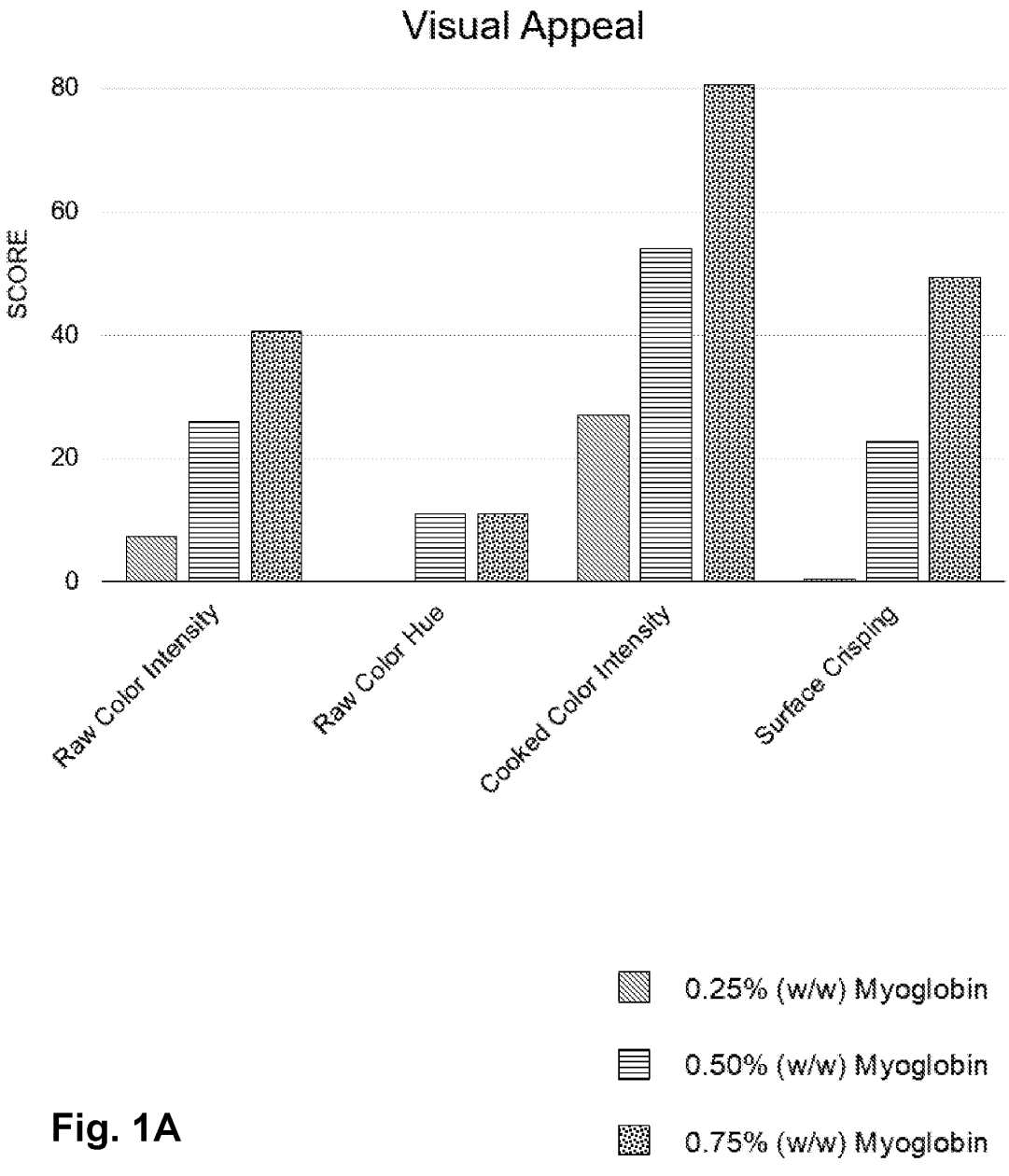

Visual Appeal
SCORE
80
60
40
20
0
Raw Color Intensity
Raw Color Hue
Cooked Color Intensity
Surface Crisping
0.25% (w/w) Myoglobin
0.50% (w/w) Myoglobin
0.75% (w/w) Myoglobin

Fig. 1A

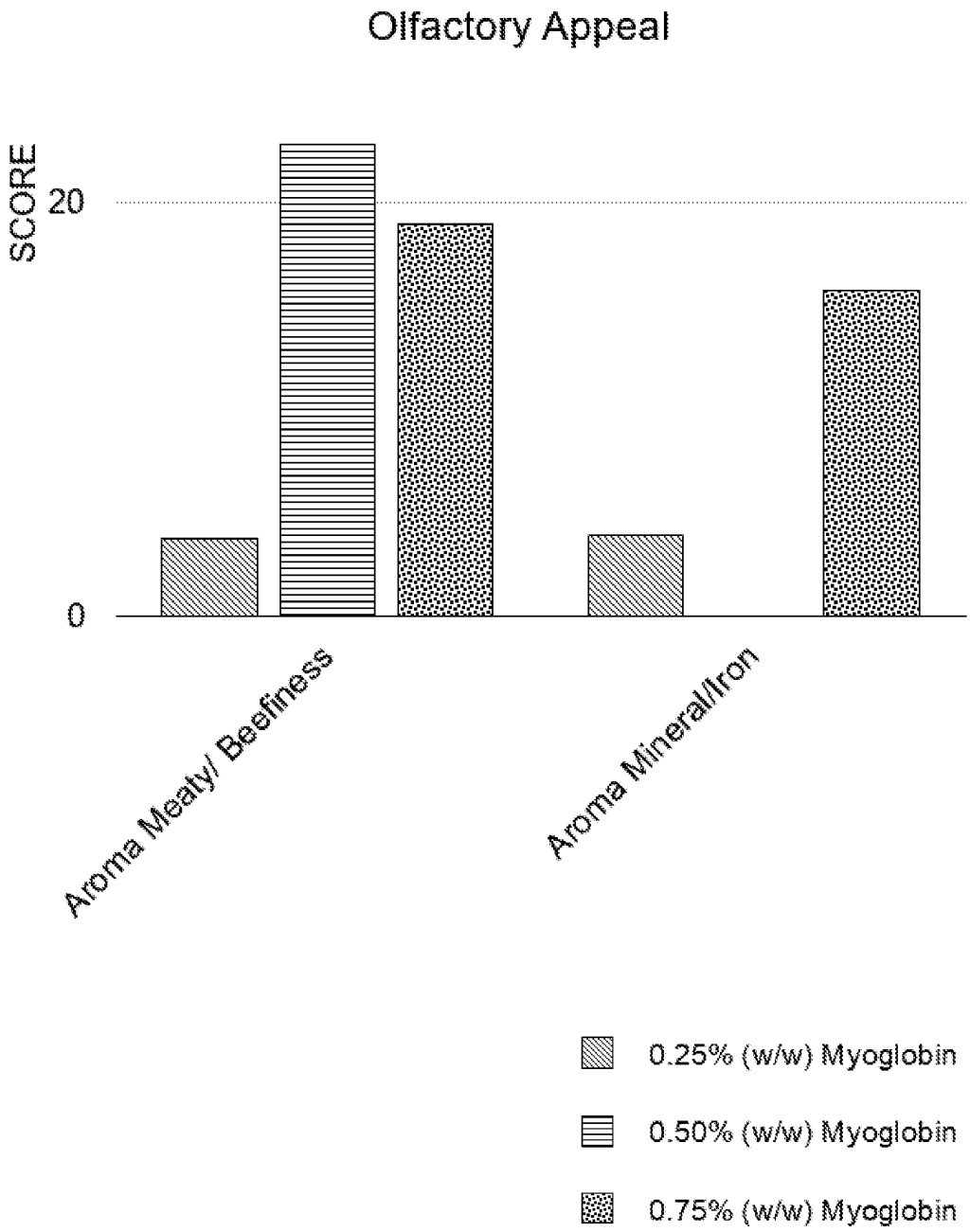

Olfactory Appeal
SCORE
20
0
Aroma Meaty/ Beefiness
Aroma Mineral/Iron
0.25% (w/w) Myoglobin
0.50% (w/w) Myoglobin
0.75% (w/w) Myoglobin

Fig. 1B

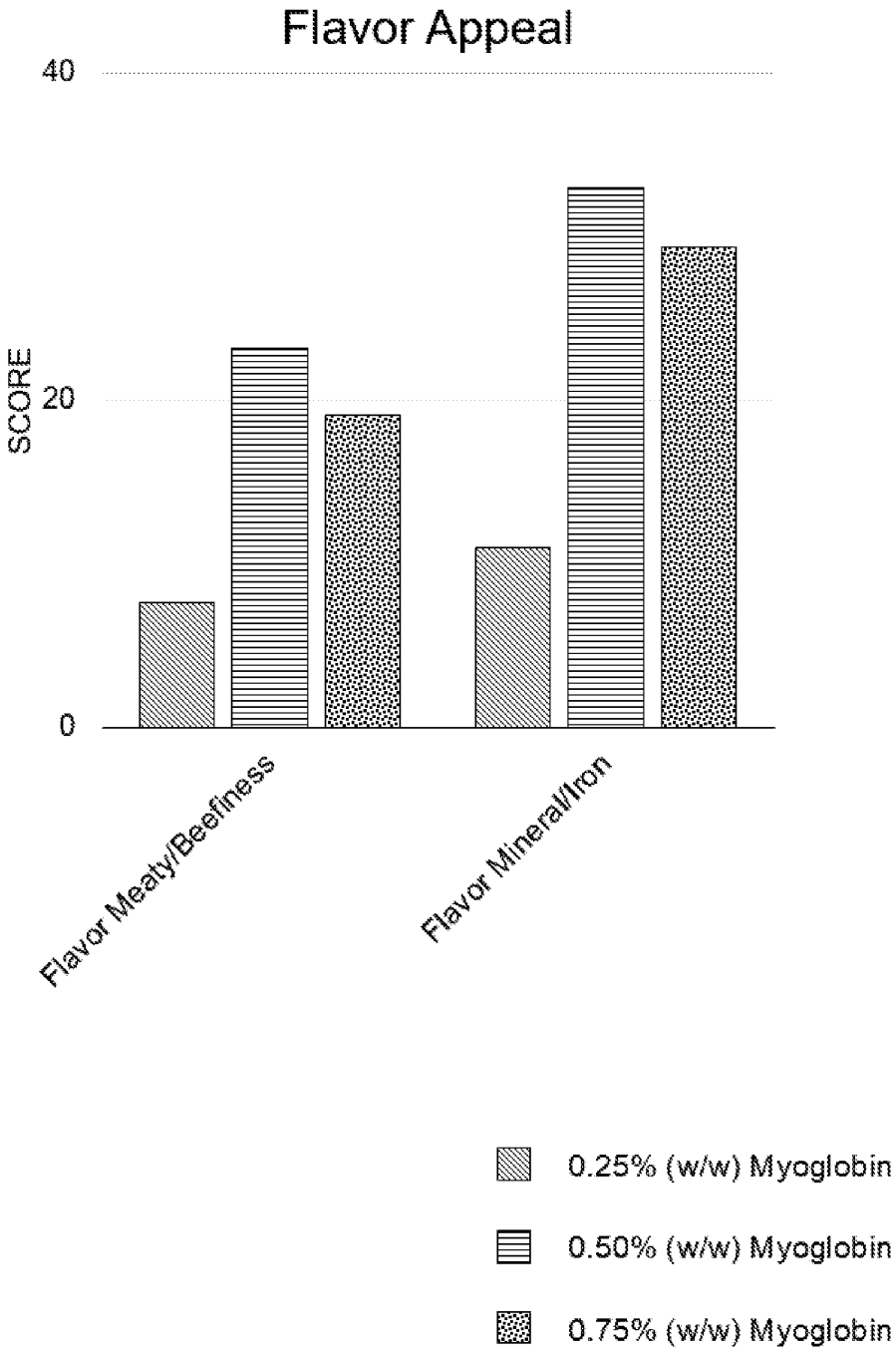

Flavor Appeal
40
20
0
SCORE
Flavor Meaty/Beefiness
Flavor Mineral/Iron
0.25% (w/w) Myoglobin
0.50% (w/w) Myoglobin
0.75% (w/w) Myoglobin

Fig. 1C

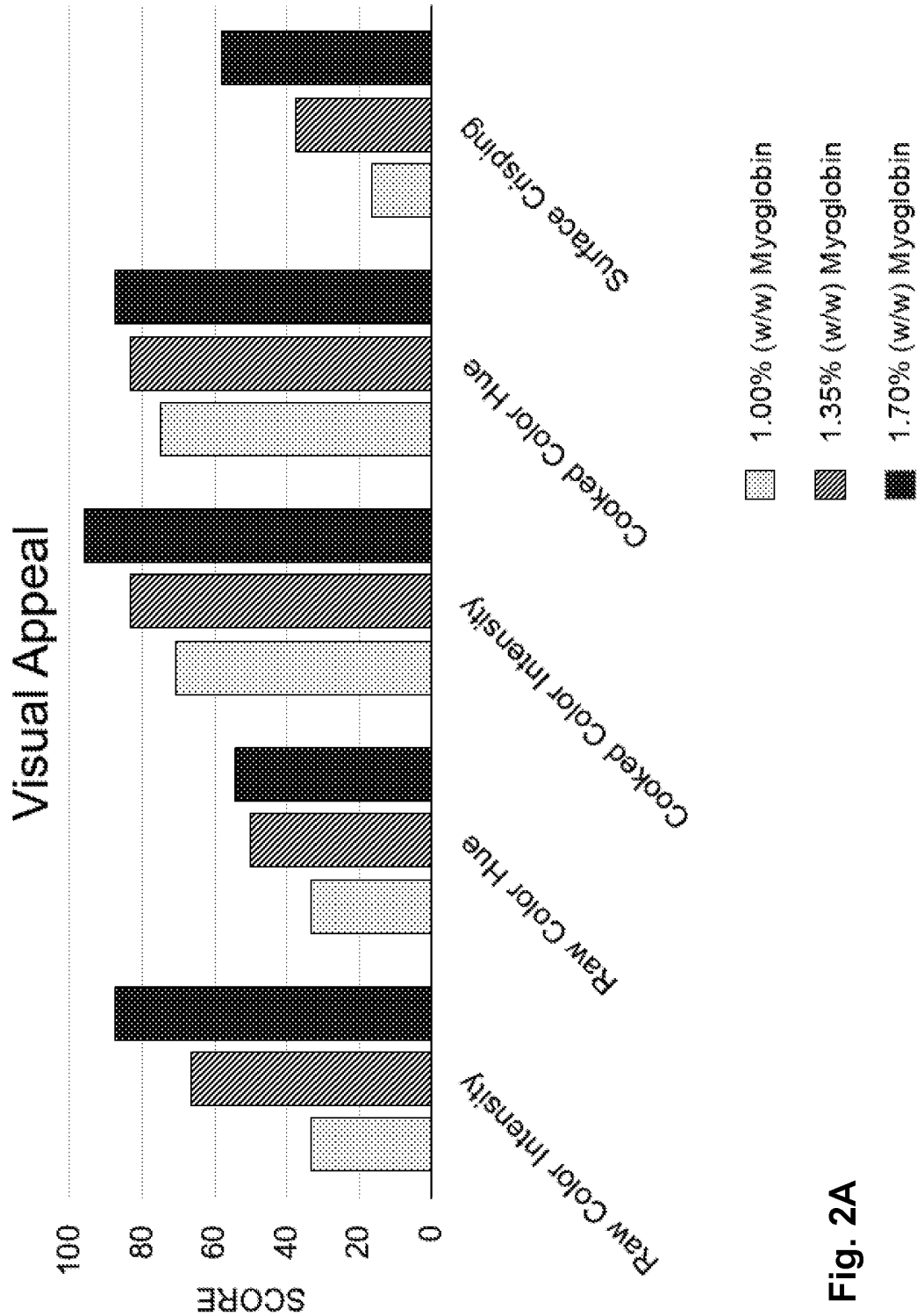

Visual Appeal
SCORE
100
80
60
40
20
0
Raw Color Intensity
Raw Color Hue
Cooked Color Intensity
Cooked Color Hue
Surface Crisping
1.00% (w/w) Myoglobin
1.35% (w/w) Myoglobin
1.70% (w/w) Myoglobin

Fig. 2A

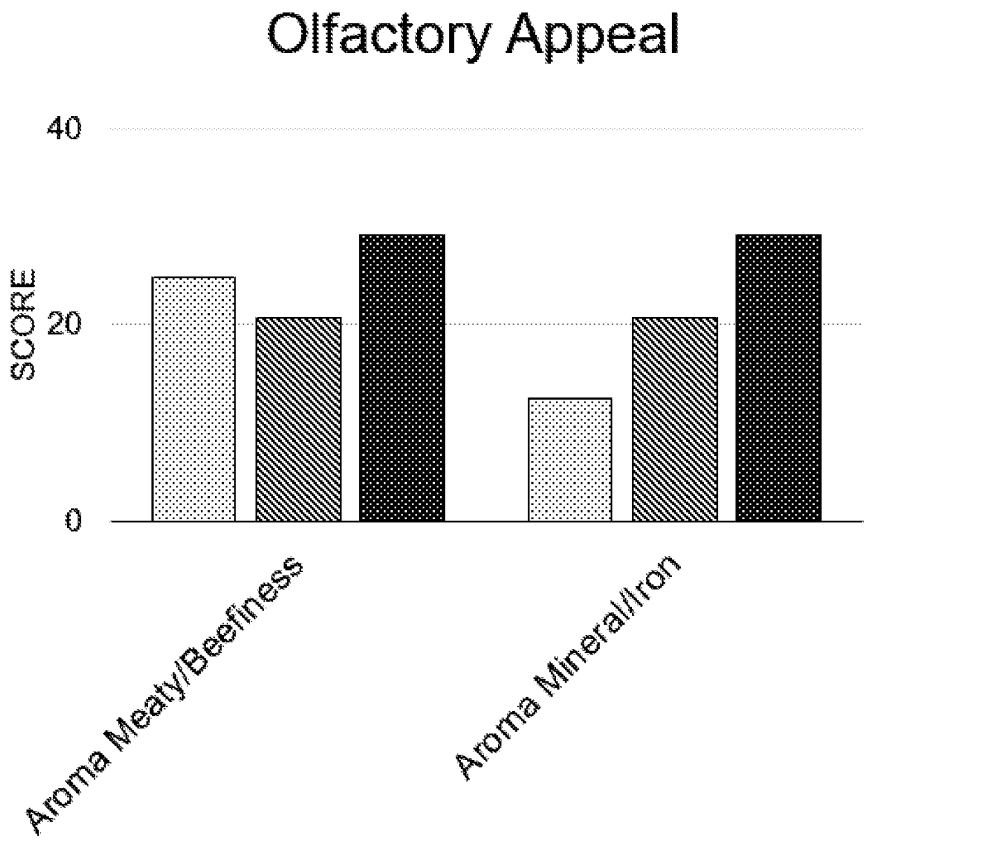

Olfactory Appeal
40
20
0
SCORE
Aroma Meaty/Beefiness
Aroma Mineral/Iron
1.00% (w/w) Myoglobin
1.35% (w/w) Myoglobin
1.70% (w/w) Myoglobin

Fig. 2B

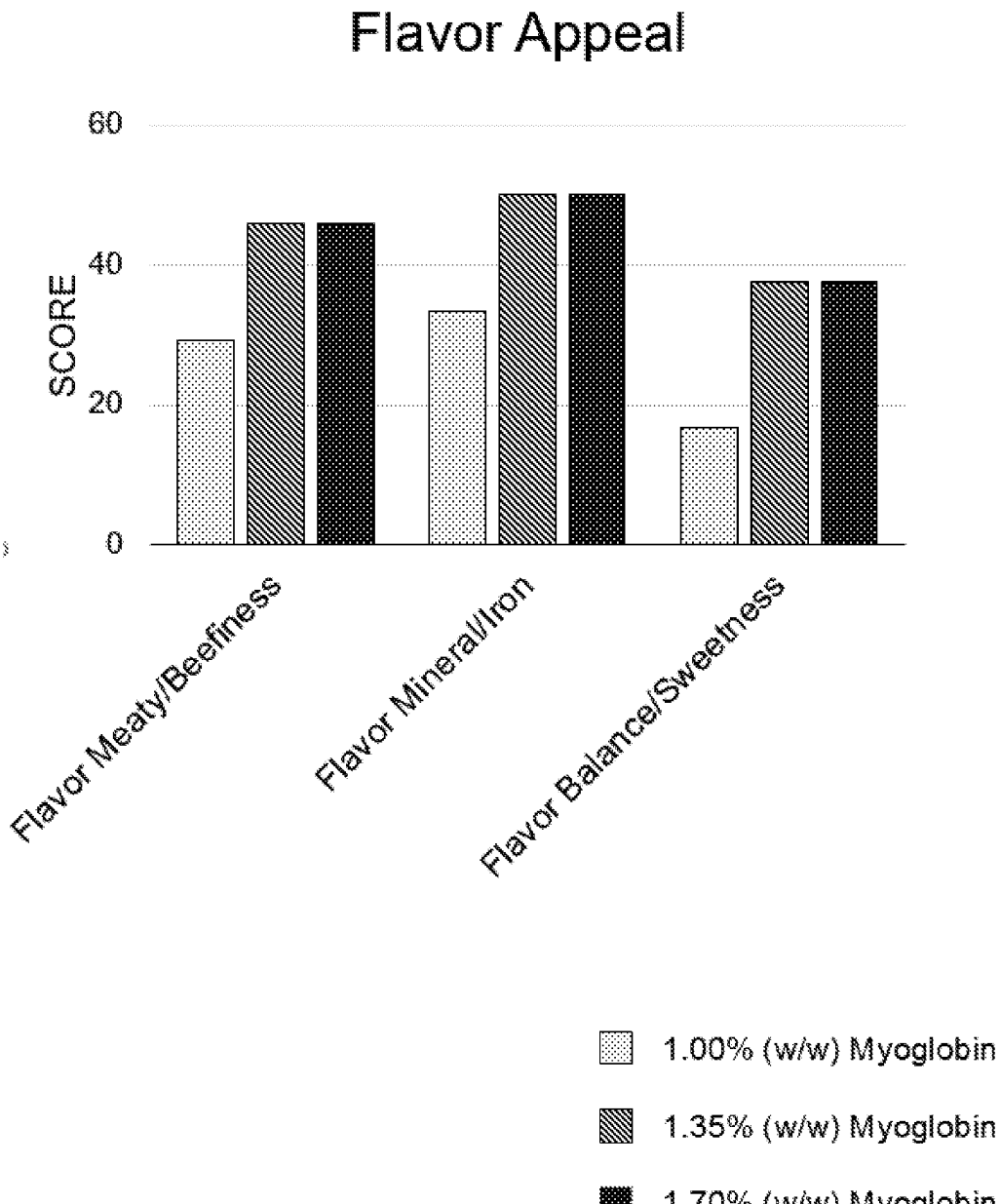

Flavor Appeal
60
40
20
0
SCORE
Flavor Meaty/Beefiness
Flavor Mineral/Iron
Flavor Balance/Sweetness
1.00% (w/w) Myoglobin
1.35% (w/w) Myoglobin
1.70% (w/w) Myoglobin

Fig. 2C

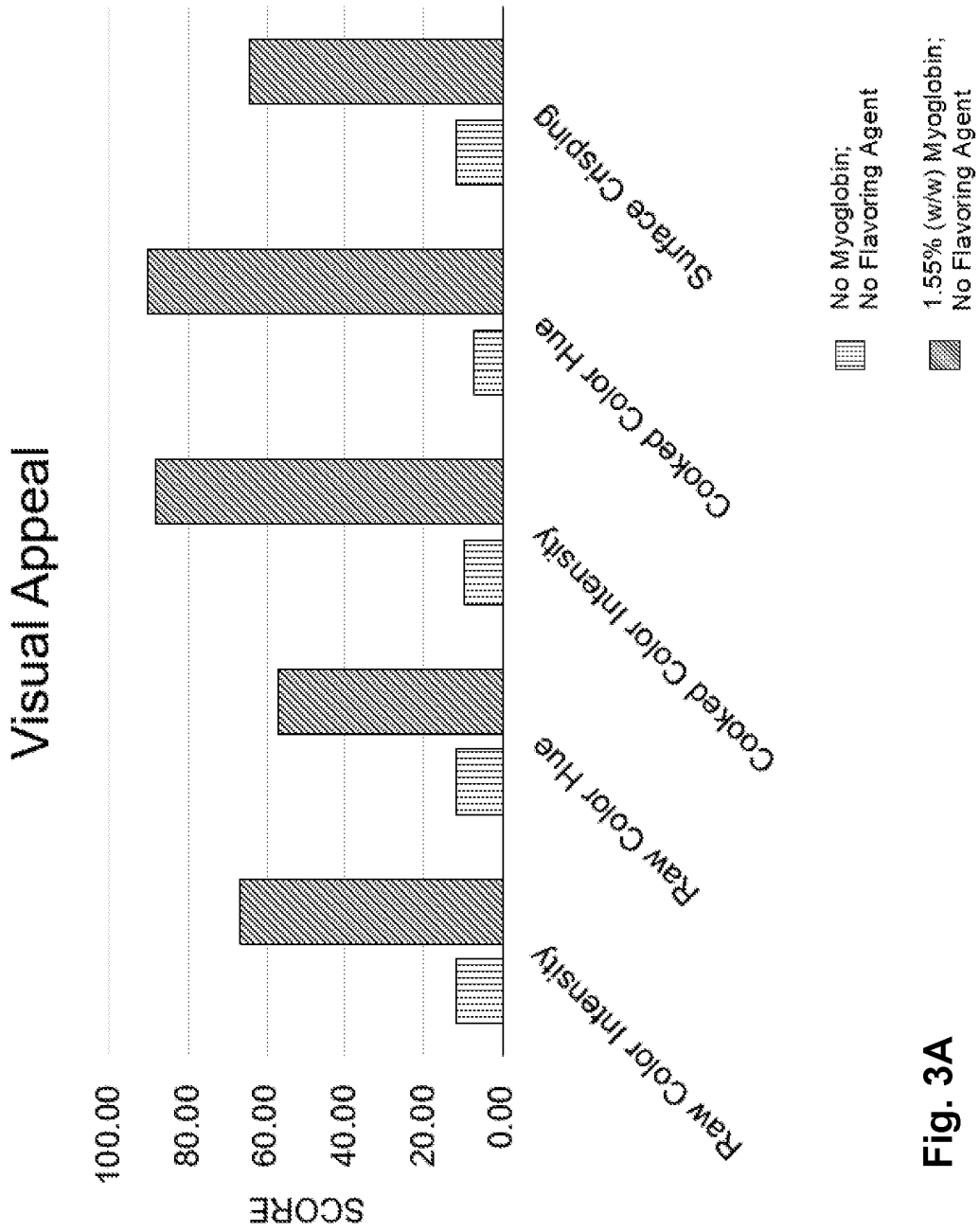

Visual Appeal
SCORE
100.00
80.00
60.00
40.00
20.00
0.00
Raw Color Intensity
Raw Color Hue
Cooked Color Intensity
Cooked Color Hue
Surface Crisping
No Myoglobin;
No Flavoring Agent
1.55% (w/w) Myoglobin;
No Flavoring Agent

Fig. 3A

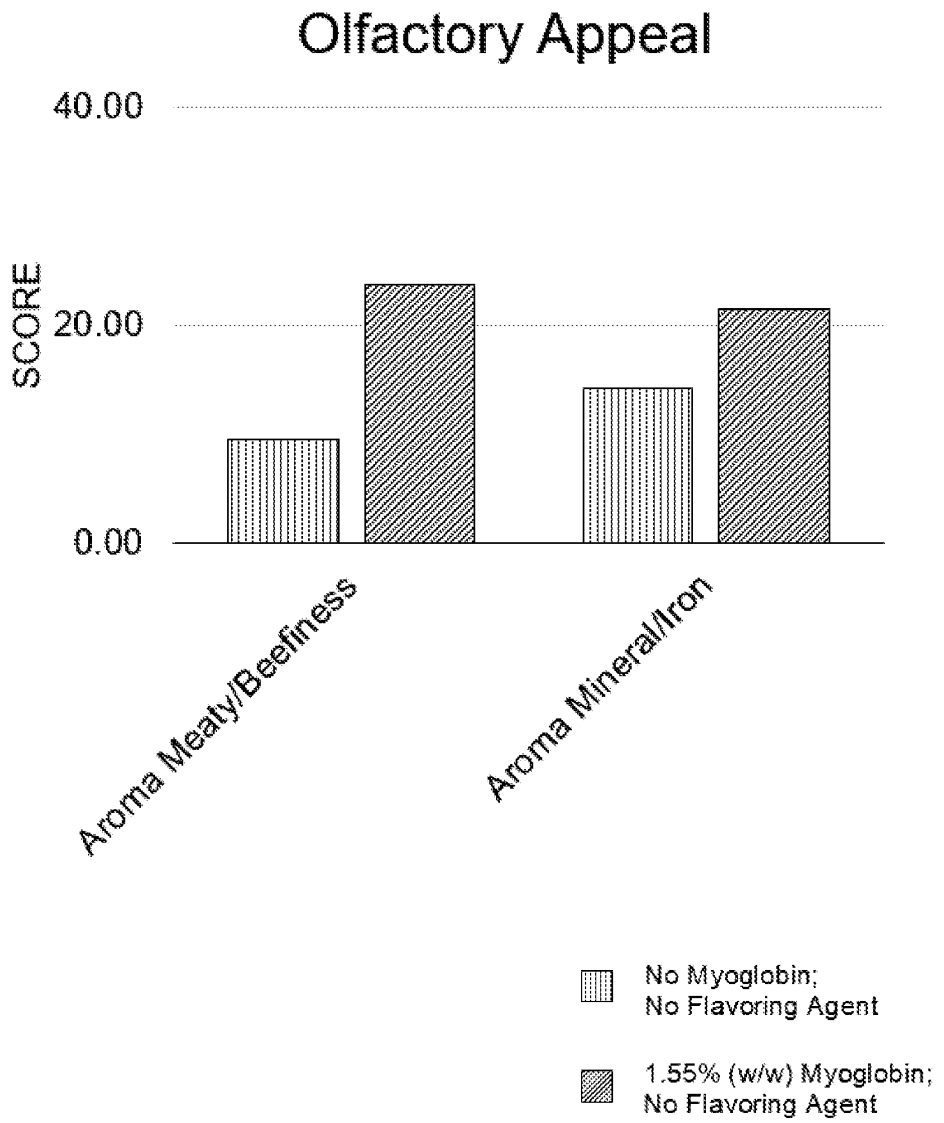

Olfactory Appeal
40.00
20.00
0.00
SCORE
Aroma Meaty/Beefiness
Aroma Mineral/Iron
No Myoglobin;
No Flavoring Agent
1.55% (w/w) Myoglobin;
No Flavoring Agent

Fig. 3B

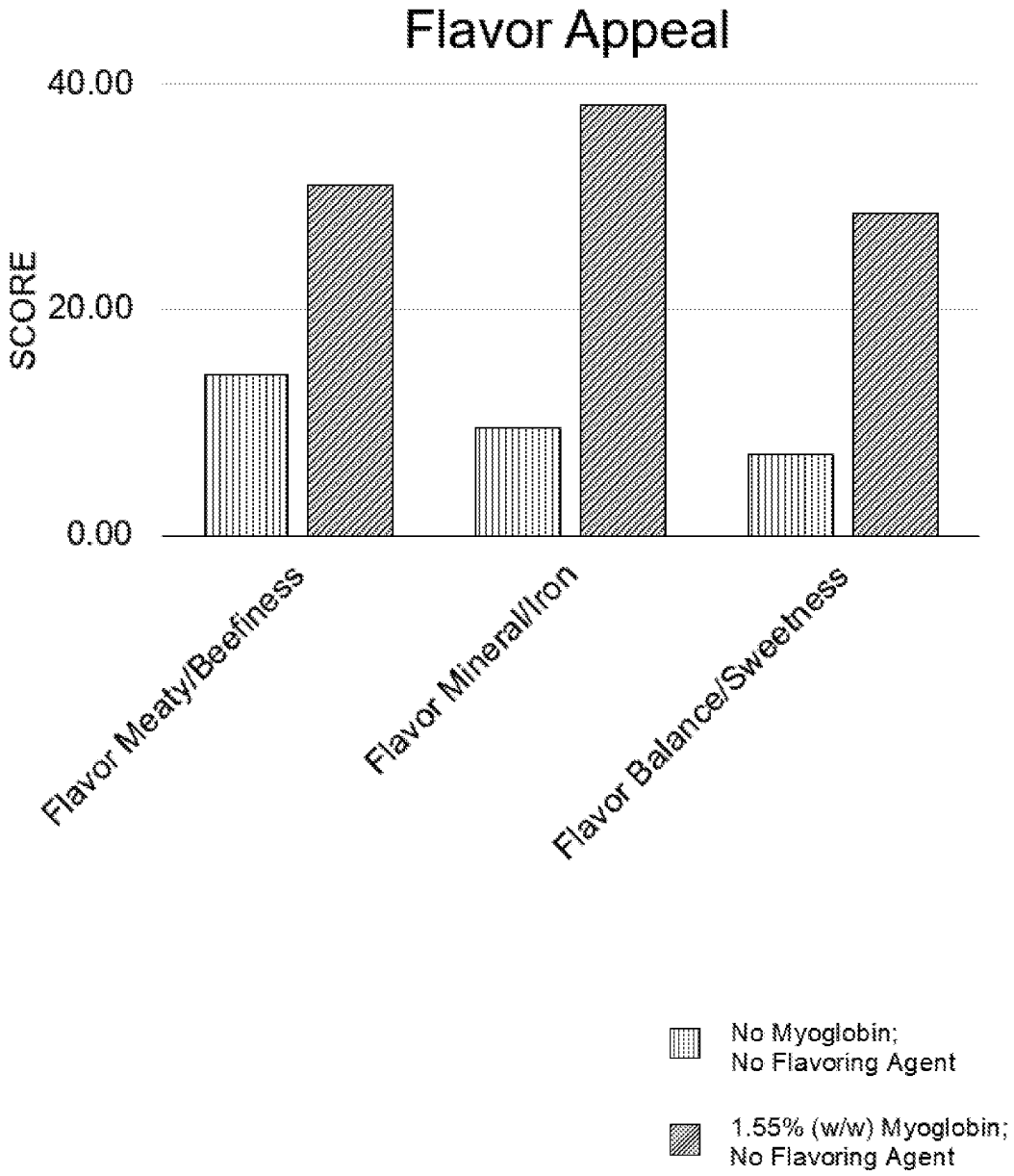

Flavor Appeal
40.00
20.00
0.00
SCORE
Flavor Meaty/Beefiness
Flavor Mineral/Iron
Flavor Balance/Sweetness
No Myoglobin;
No Flavoring Agent
1.55% (w/w) Myoglobin;
No Flavoring Agent

Fig. 3C

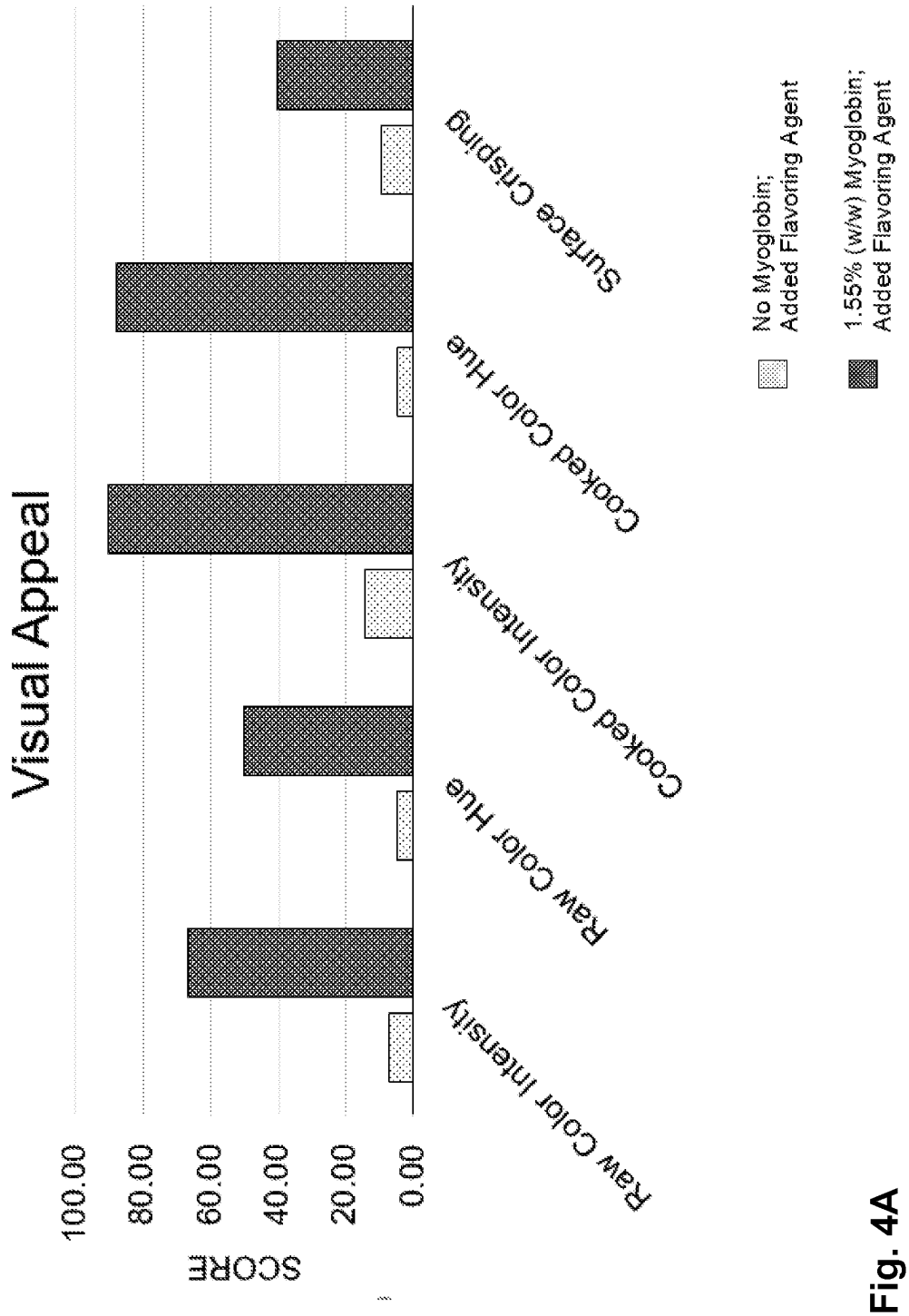

Visual Appeal
SCORE
100.00
80.00
60.00
40.00
20.00
0.00
Raw Color Intensity
Raw Color Hue
Cooked Color Intensity
Cooked Color Hue
Surface Crisping
No Myoglobin; Added Flavoring Agent
1.55% (w/w) Myoglobin; Added Flavoring Agent

Fig. 4A

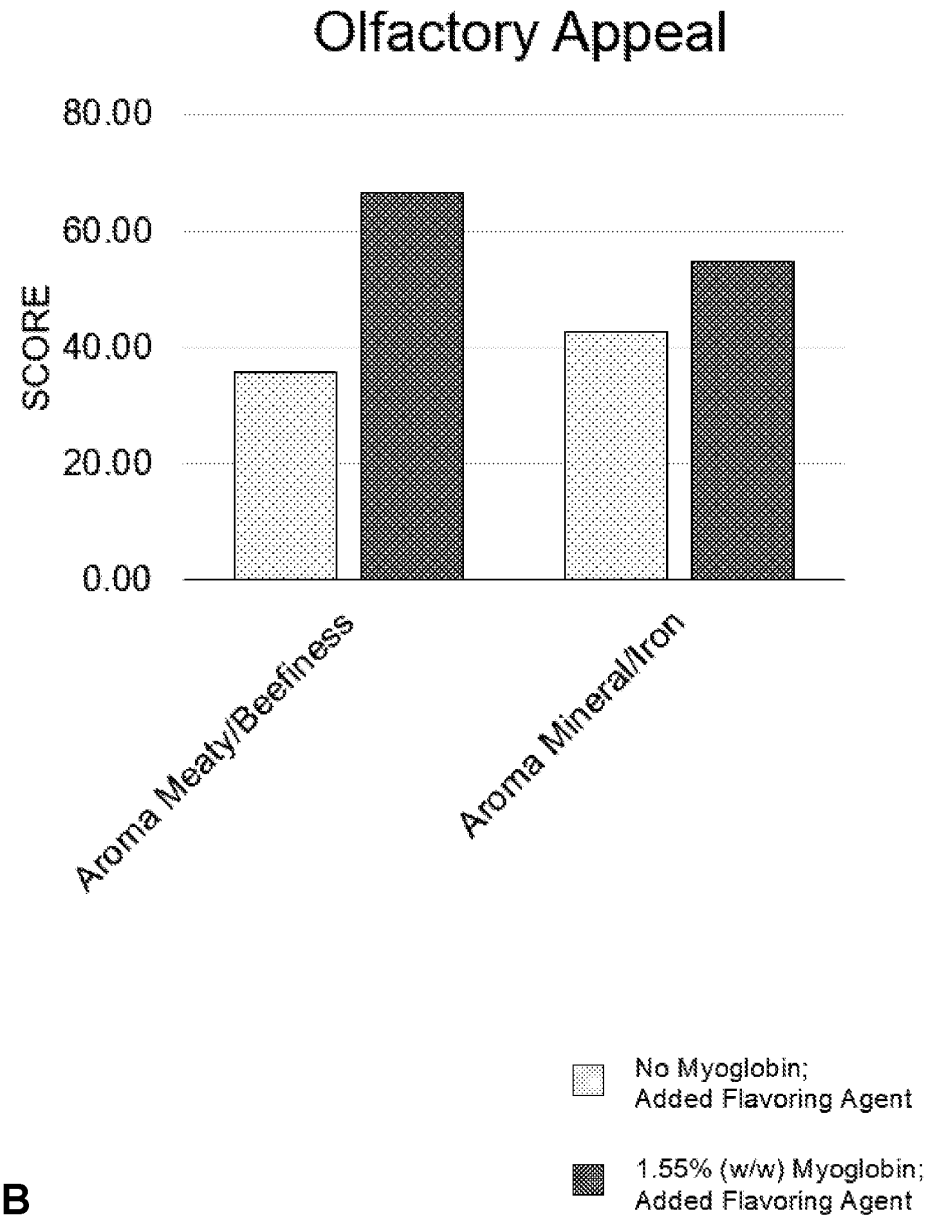

Olfactory Appeal
80.00
60.00
40.00
20.00
0.00
SCORE
Aroma Meaty/Beefiness
Aroma Mineral/Iron
No Myoglobin;
Added Flavoring Agent
1.55% (w/w) Myoglobin;
Added Flavoring Agent

Fig. 4B

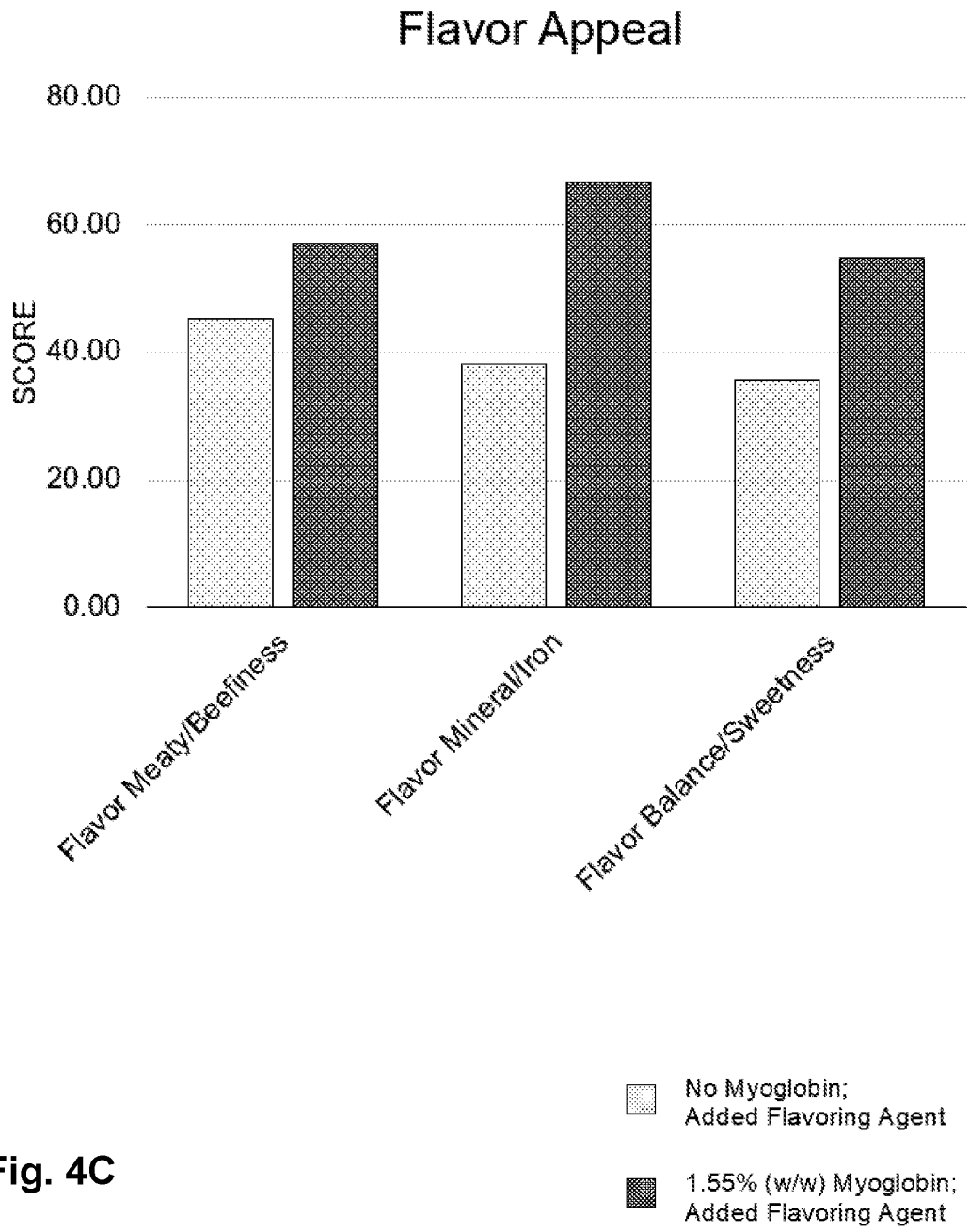

Flavor Appeal
80.00
60.00
40.00
20.00
0.00
SCORE
Flavor Meaty/Beefiness
Flavor Mineral/Iron
Flavor Balance/Sweetness
No Myoglobin;
Added Flavoring Agent
1.55% (w/w) Myoglobin;
Added Flavoring Agent

Fig. 4C

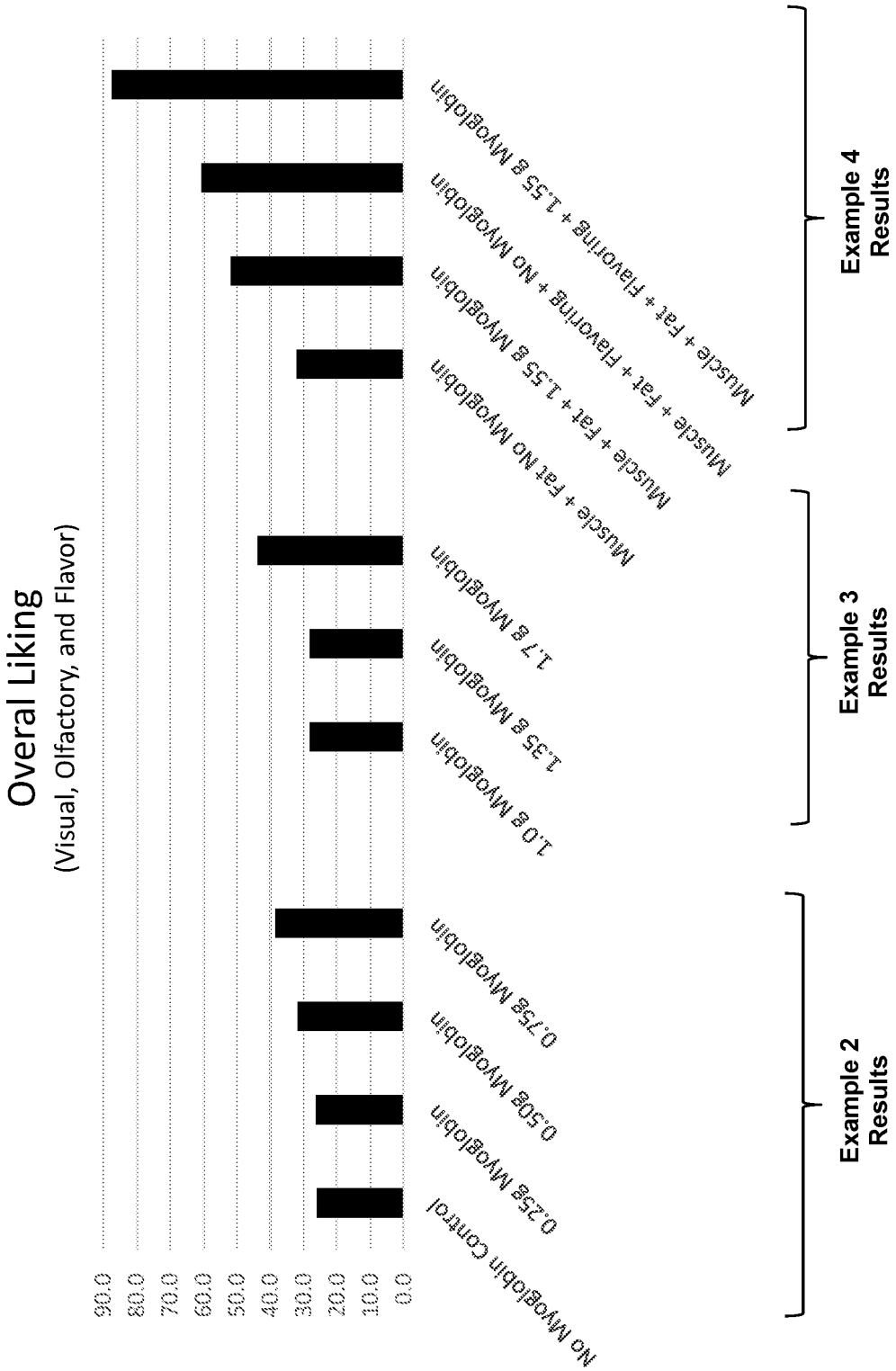

Overal Liking
(Visual, Olfactory, and Flavor)
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
No Myoglobin Control
0.25g Myoglobin
0.50g Myoglobin
0.75g Myoglobin
1.0g Myoglobin
1.35g Myoglobin
1.7g Myoglobin
Muscle + Fat No Myoglobin
Muscle + Fat + 1.55g Myoglobin
Muscle + Fat + Flavoring + No Myoglobin
Muscle + Fat + Flavoring + 1.55g Myoglobin
Example 2 Results
Example 3 Results
Example 4 Results

Fig. 5

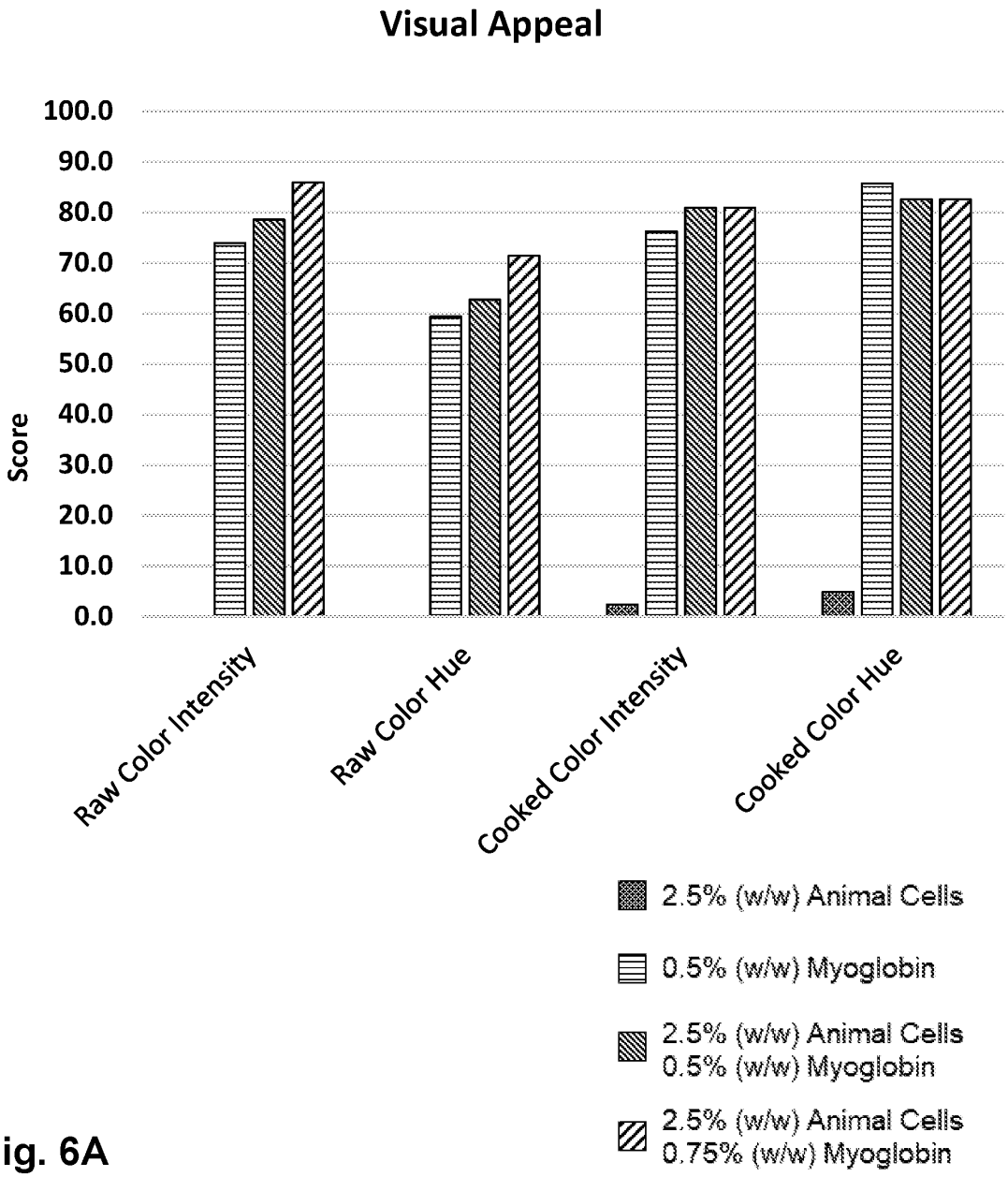

Visual Appeal
100.0
90.0
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Score
Raw Color Intensity
Raw Color Hue
Cooked Color Intensity
Cooked Color Hue
2.5% (w/w) Animal Cells
0.5% (w/w) Myoglobin
2.5% (w/w) Animal Cells
0.5% (w/w) Myoglobin
2.5% (w/w) Animal Cells
0.75% (w/w) Myoglobin

Fig. 6A

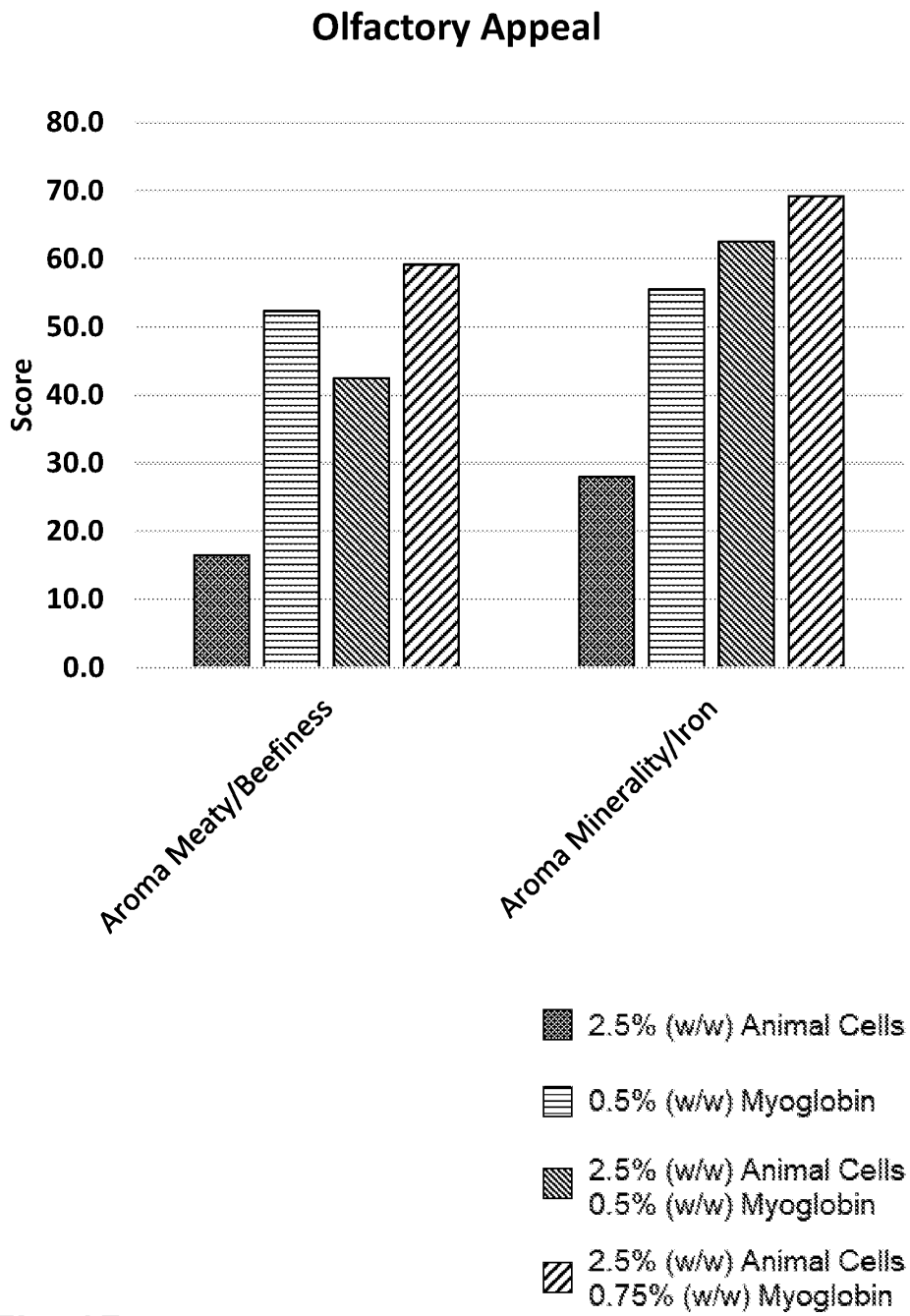

Olfactory Appeal
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Score
Aroma Meaty/Beefiness
Aroma Minerality/Iron
2.5% (w/w) Animal Cells
0.5% (w/w) Myoglobin
2.5% (w/w) Animal Cells
0.5% (w/w) Myoglobin
2.5% (w/w) Animal Cells
0.75% (w/w) Myoglobin

Fig. 6B

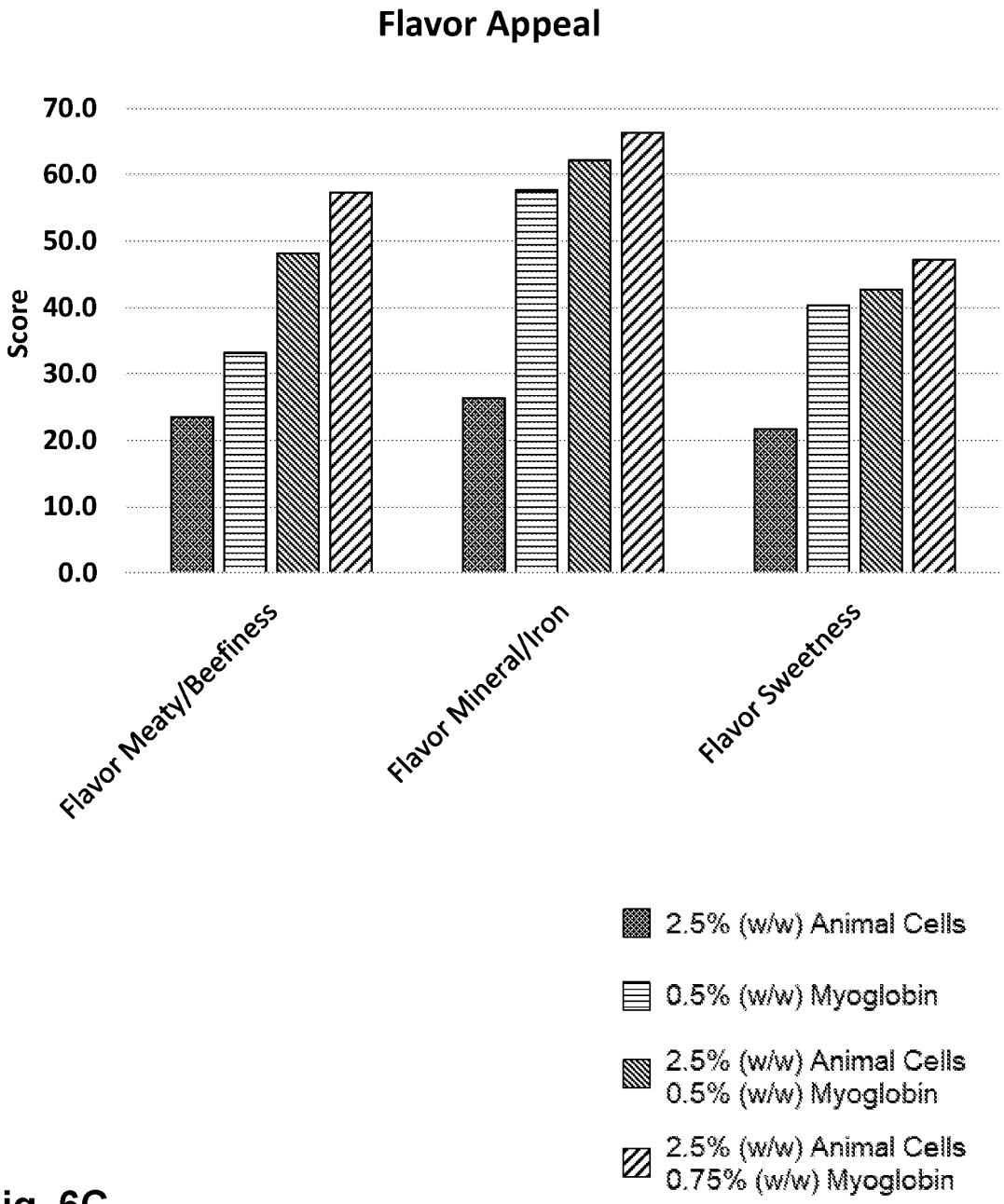

Flavor Appeal
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Score
Flavor Meaty/Beefiness
Flavor Mineral/Iron
Flavor Sweetness
2.5% (w/w) Animal Cells
0.5% (w/w) Myoglobin
2.5% (w/w) Animal Cells 0.5% (w/w) Myoglobin
2.5% (w/w) Animal Cells 0.75% (w/w) Myoglobin

Fig. 6C

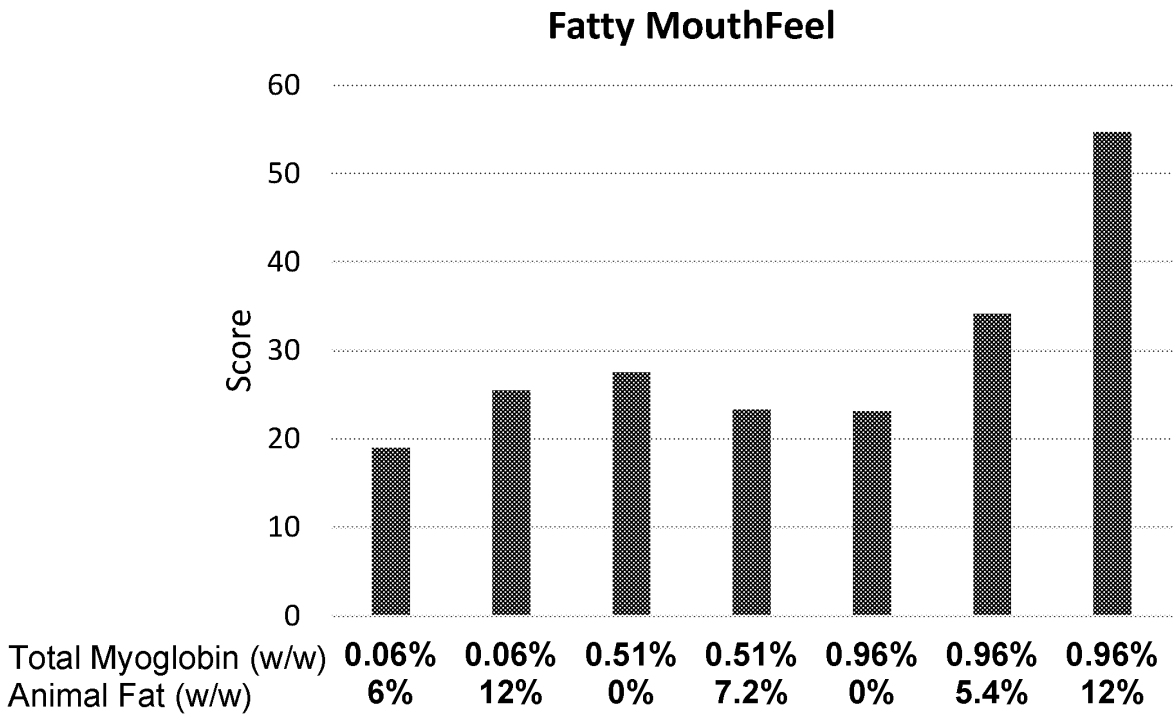

Fatty MouthFeel
Score
60
50
40
30
20
10
0
Total Myoglobin (w/w)
Animal Fat (w/w)
0.06% 6%
0.06% 12%
0.51% 0%
0.51% 7.2%
0.96% 0%
0.96% 5.4%
0.96% 12%

Fig. 7

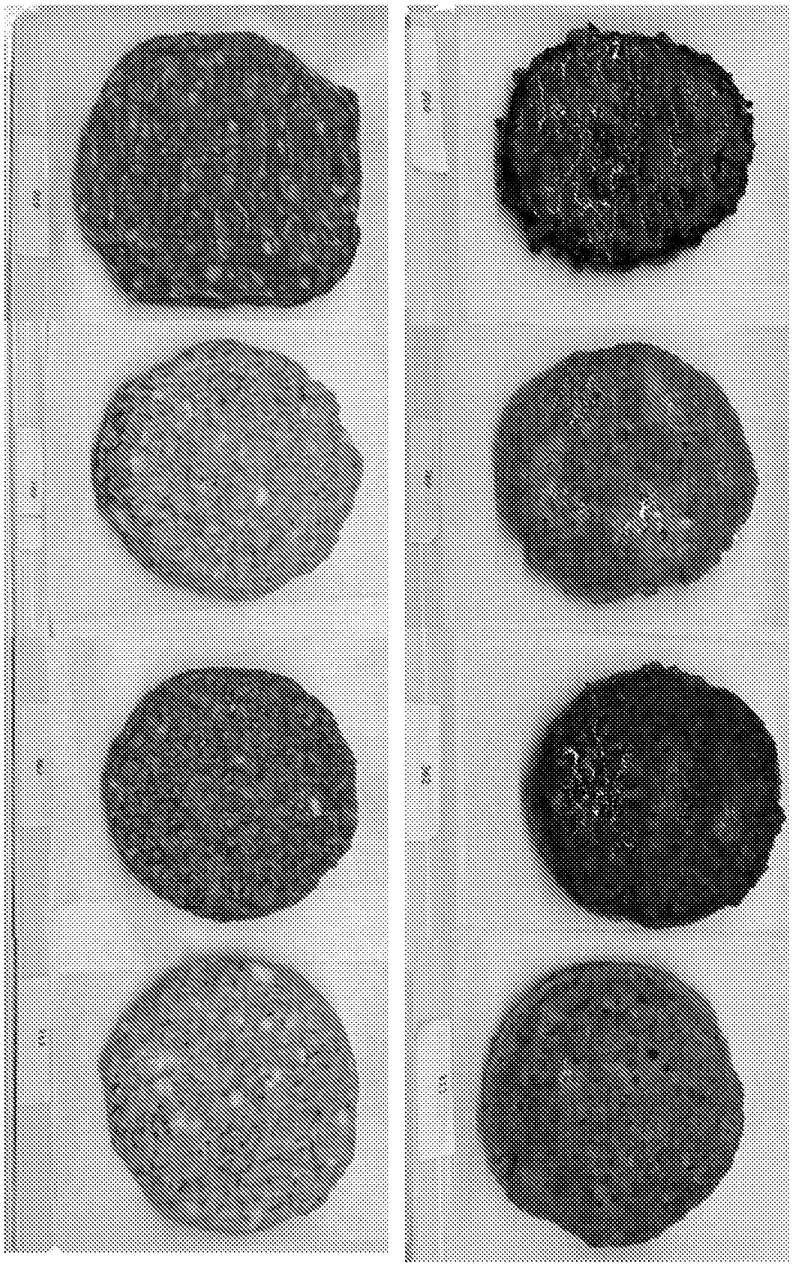

Beef Control Patty
5% (w/w) animal meat
5% (w/w) animal fat
No Myoglobin
No Flavoring Agent
5% (w/w) animal meat
5% (w/w) animal fat
1.55% Myoglobin
No Flavoring Agent
Plant-based
Control Patty
No Flavoring Agent
Raw
Cooked

Fig. 8A

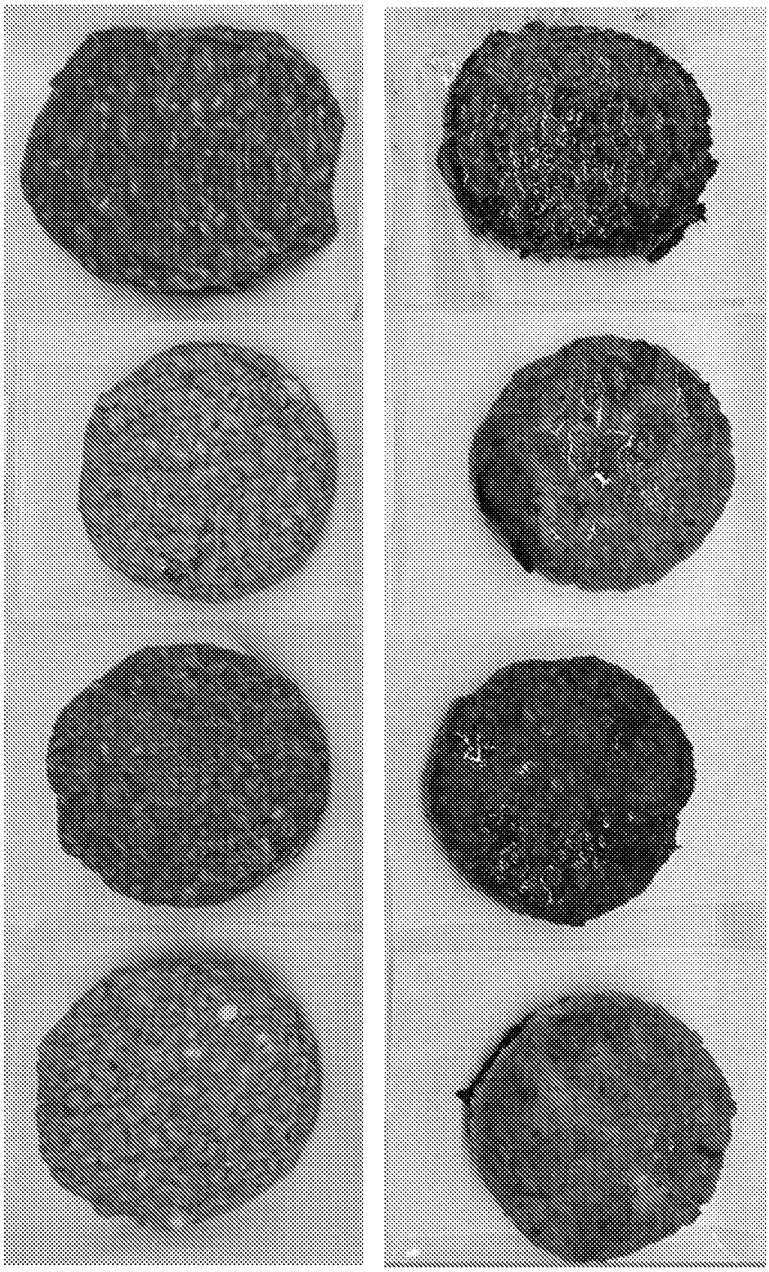

Beef Control Patty
5% (w/w) animal meat
5% (w/w) animal fat
No Myoglobin
With Flavoring Agent
5% (w/w) animal meat
5% (w/w) animal fat
1.55% Myoglobin
With Flavoring Agent
Plant-based
Control Patty
With Flavoring Agent
Raw
Cooked

Fig. 8B

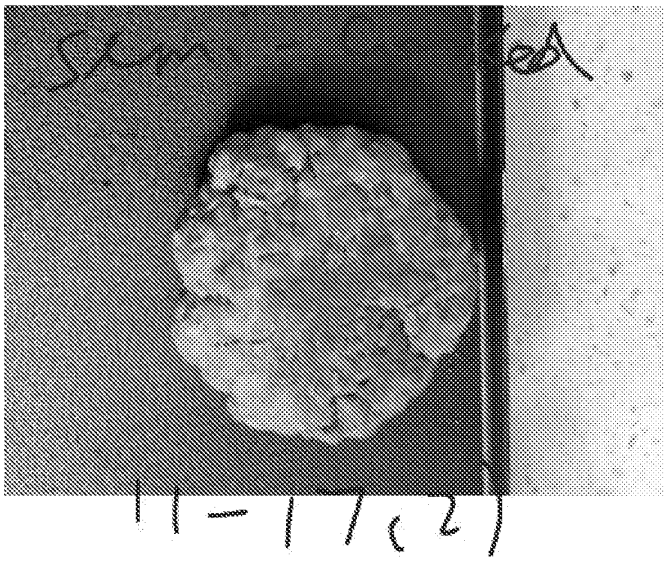


Fig. 9A

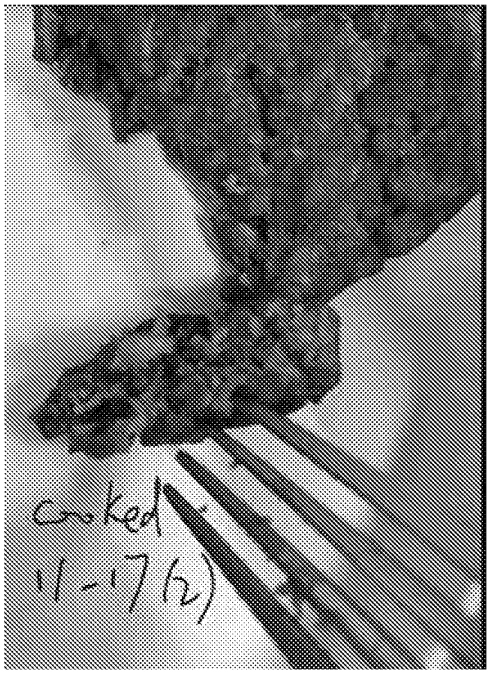


Fig. 9B