FIGURES

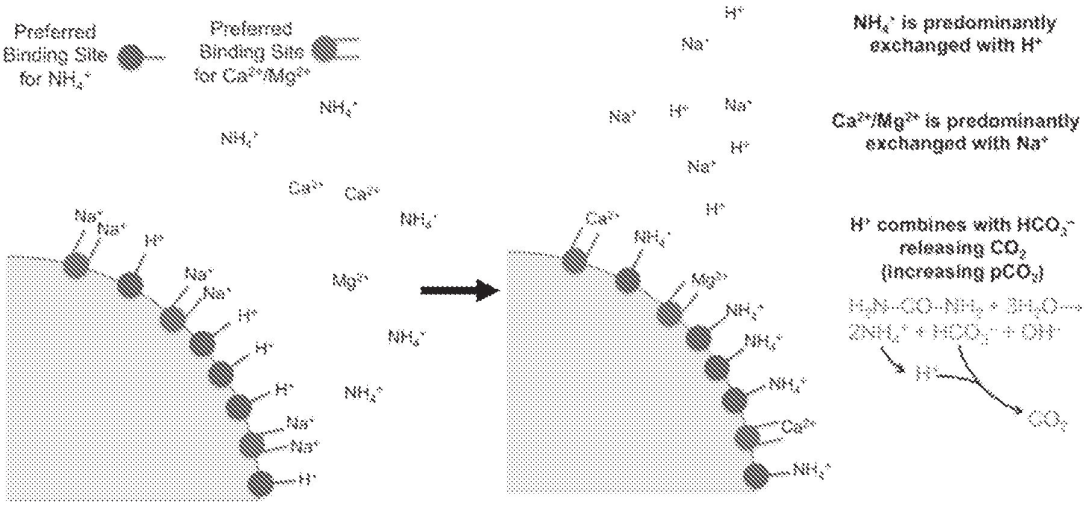


FIG. 1

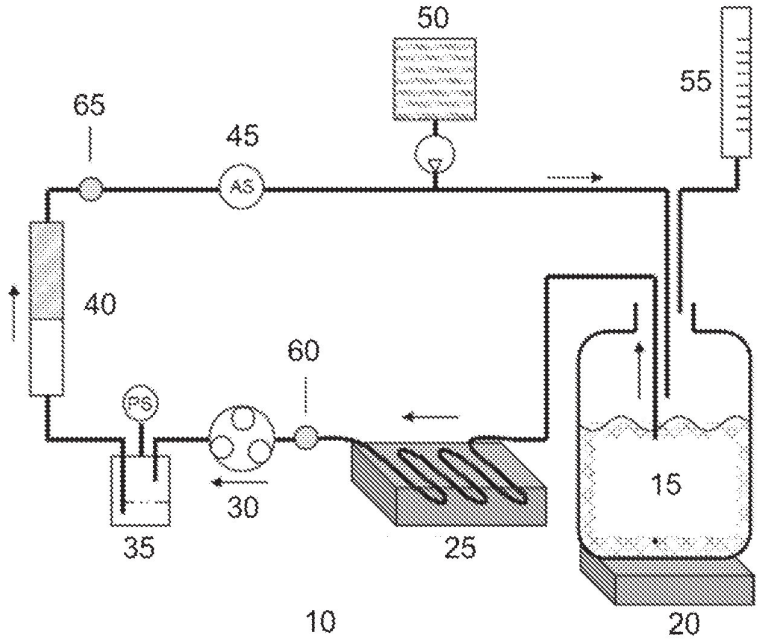


FIG. 2

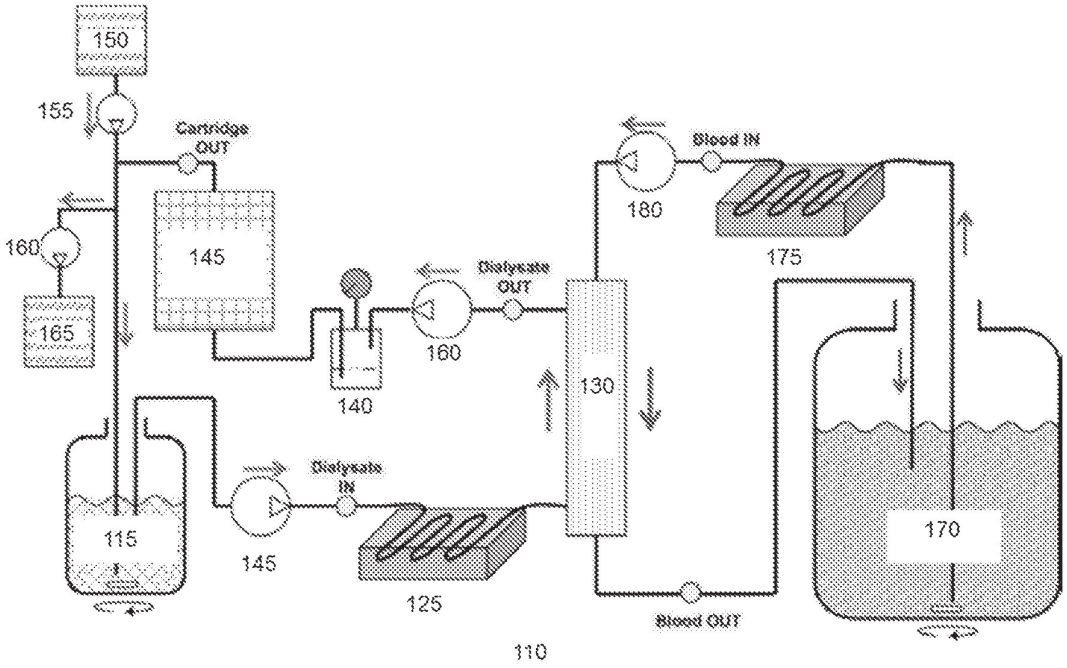

150
155
Cartridge OUT
145
160
165
140
160
Dialysate OUT
130
180
Blood IN
175
115
145
Dialysate IN
125
Blood OUT
170
110

FIG. 3

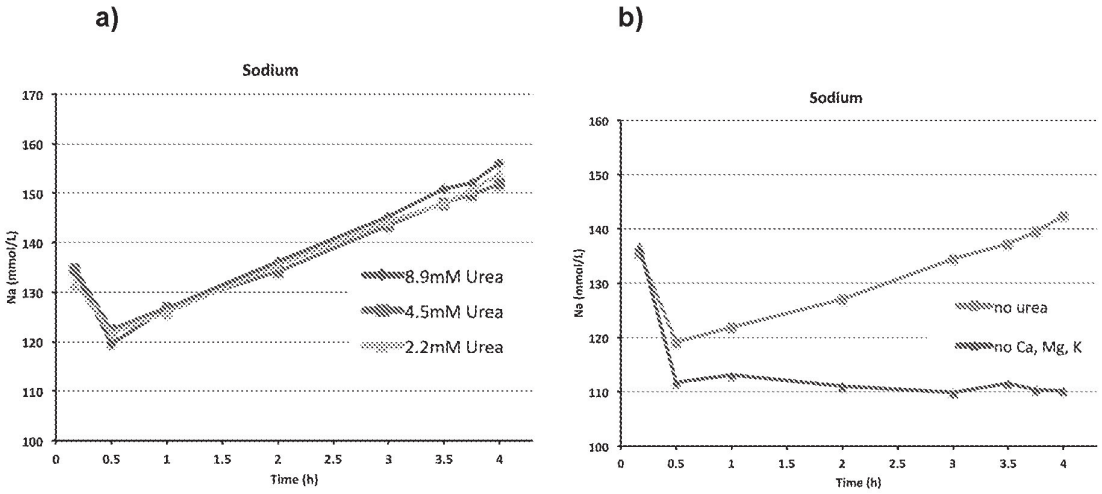

a)
Sodium
Na (mmol/L)
Time (h)
8.9mM Urea
4.5mM Urea
2.2mM Urea
b)
Sodium
Na (mmol/L)
Time (h)
no urea
no Ca, Mg, K

FIG. 4

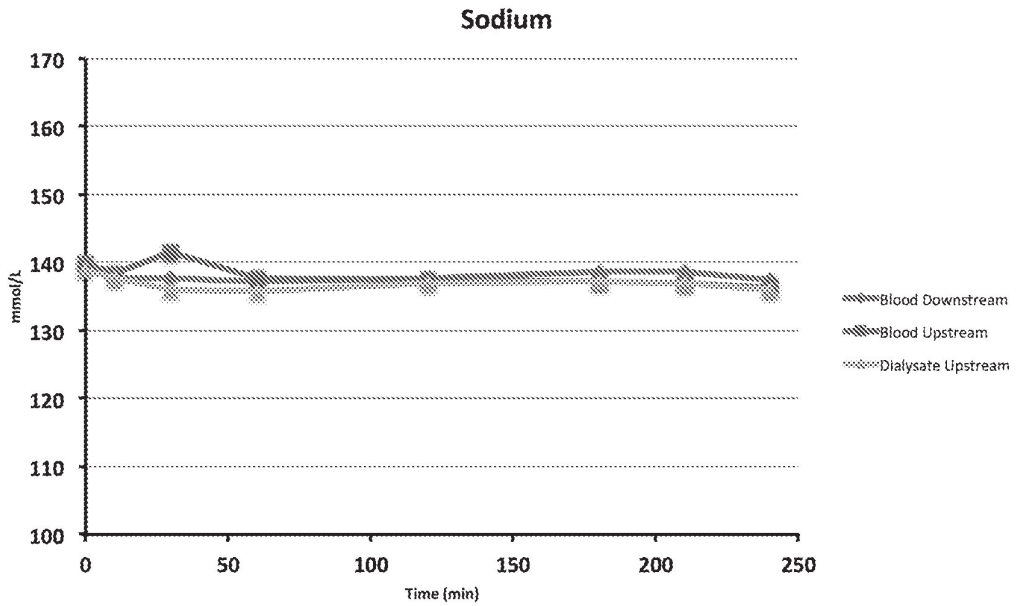

Sodium
170
160
150
140
130
120
110
100
mmol/L
0
50
100
150
200
250
Time (min)
Blood Downstream
Blood Upstream
Dialysate Upstream

FIG. 5

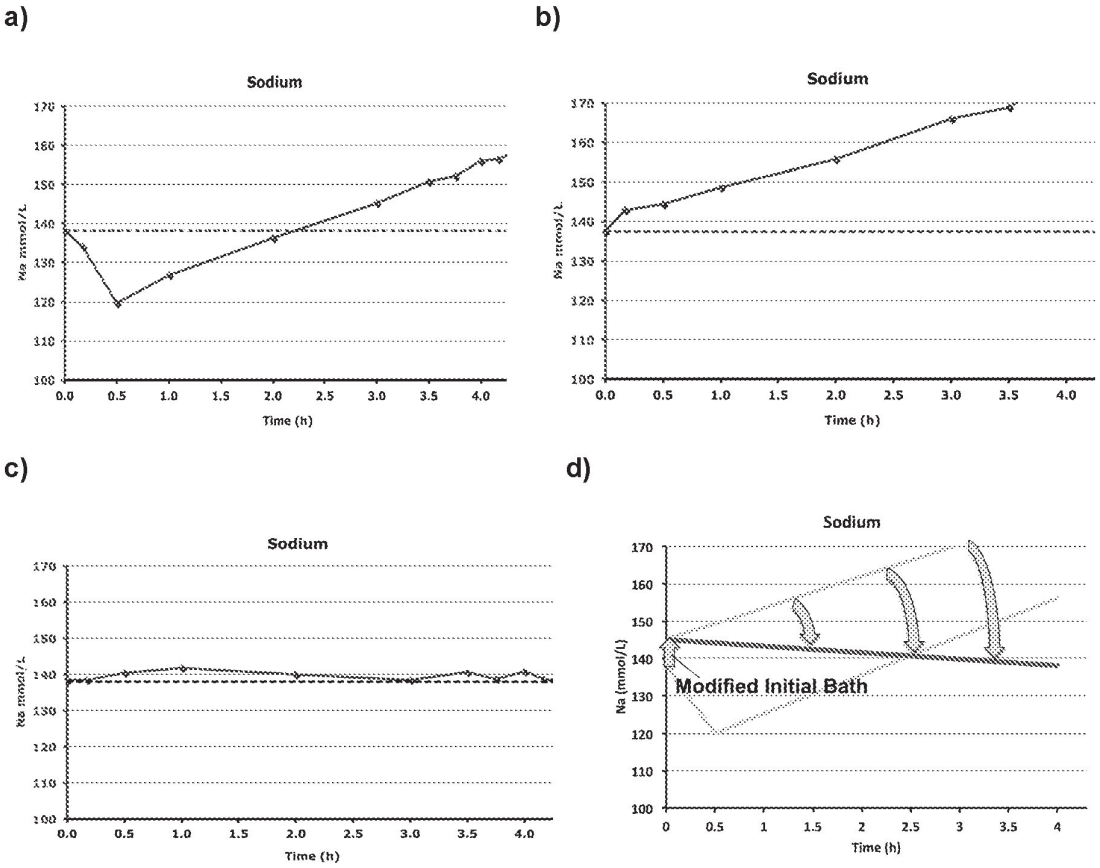

a)
b)
c)
d)
Sodium
Time (h)
Sodium
Time (h)
Sodium
Time (h)
Sodium
Na (mmol/L)
Modified Initial Bath
Time (h)

FIG. 6

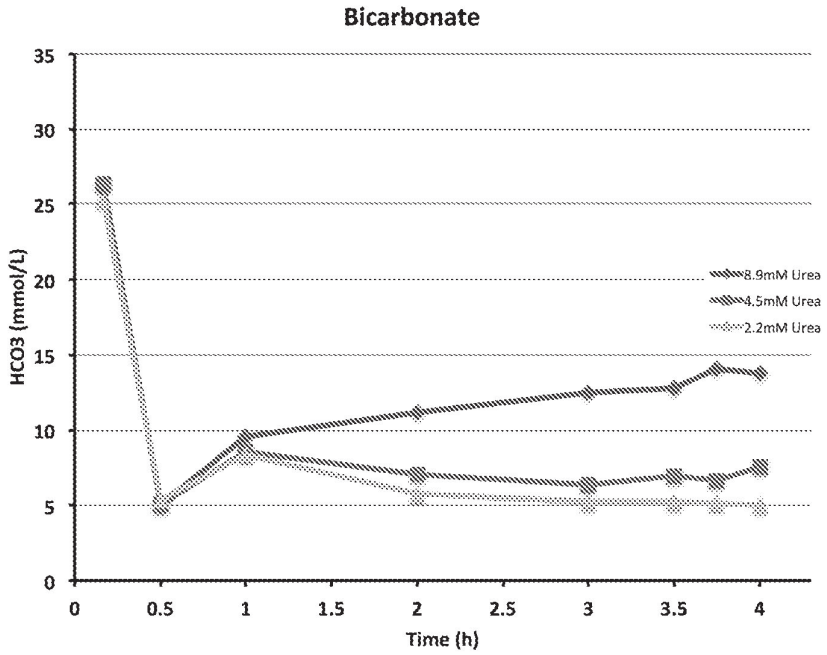

Bicarbonate
35
30
25
20
15
10
5
0
HCO3 (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
8.9mM Urea
4.5mM Urea
2.2mM Urea

FIG. 7

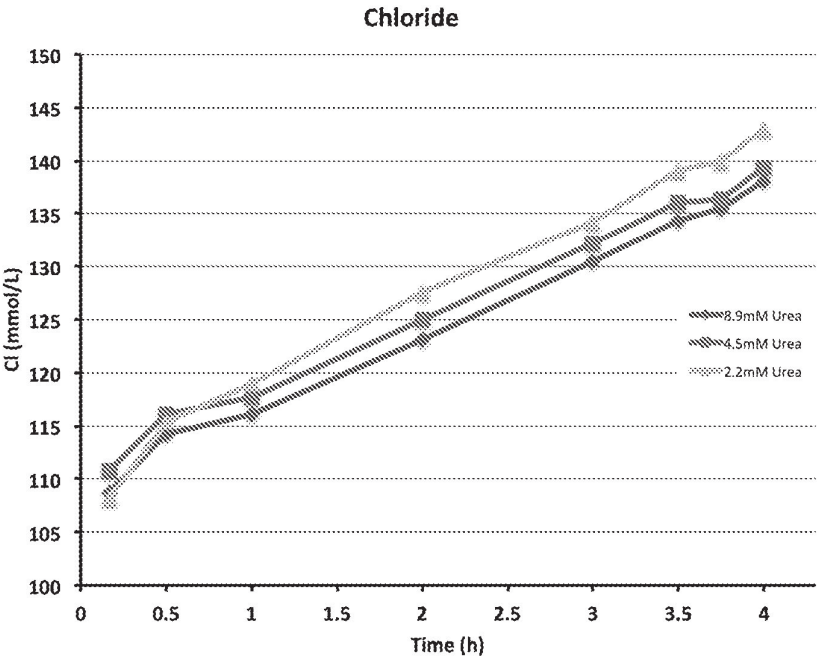

Chloride
150
145
140
135
130
125
120
115
110
105
100
Cl (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
8.9mM Urea
4.5mM Urea
2.2mM Urea

FIG. 8

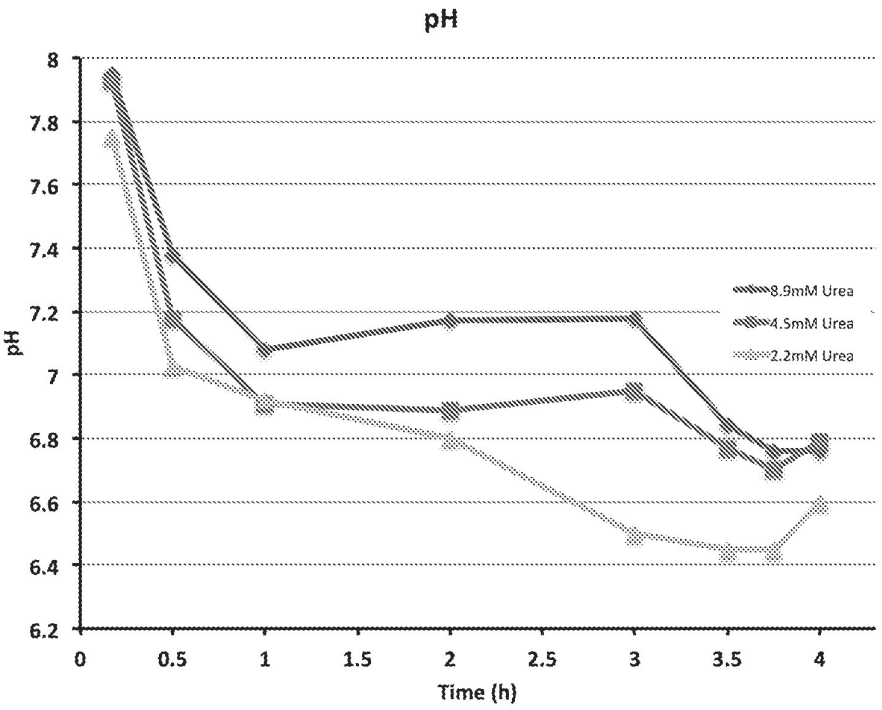

pH
8
7.8
7.6
7.4
7.2
7
6.8
6.6
6.4
6.2
pH
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
8.9mM Urea
4.5mM Urea
2.2mM Urea

FIG. 9

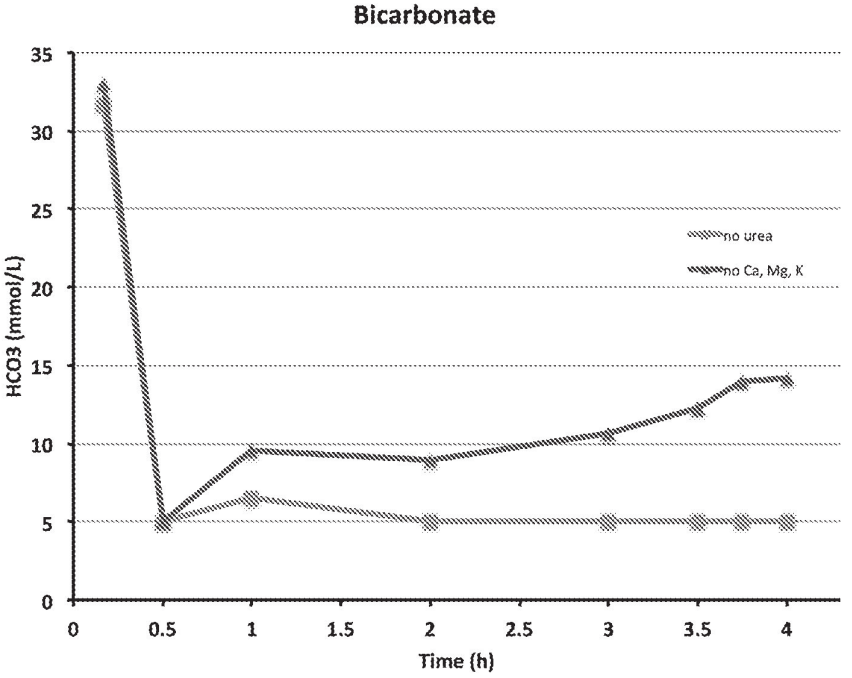

Bicarbonate
35
30
25
20
15
10
5
0
HCO3 (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
no urea
no Ca, Mg, K

FIG. 10

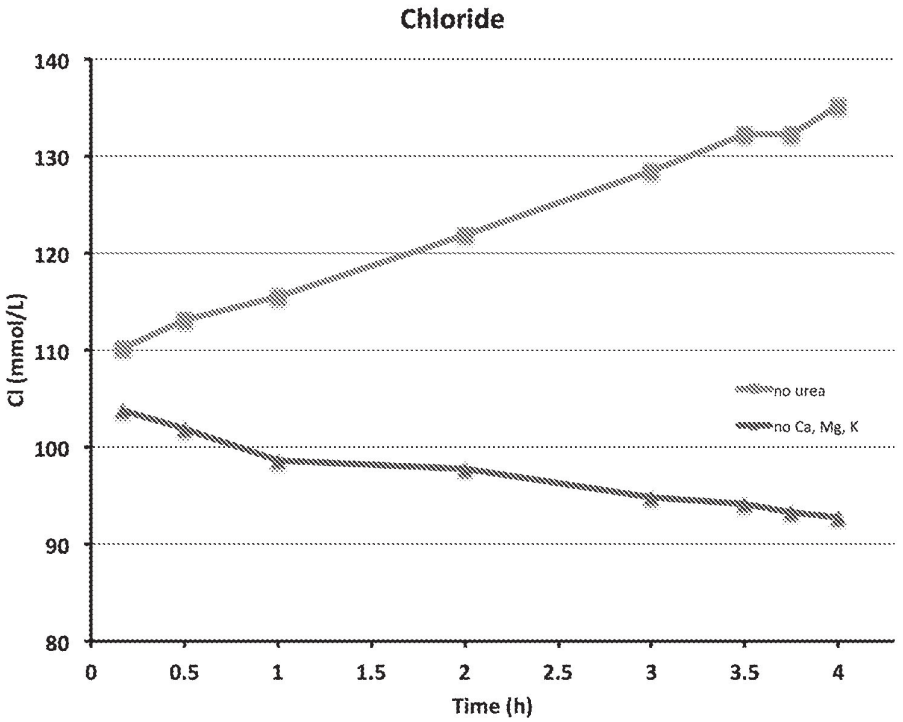

Chloride
140
130
120
110
100
90
80
Cl (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
no urea
no Ca, Mg, K

FIG. 11

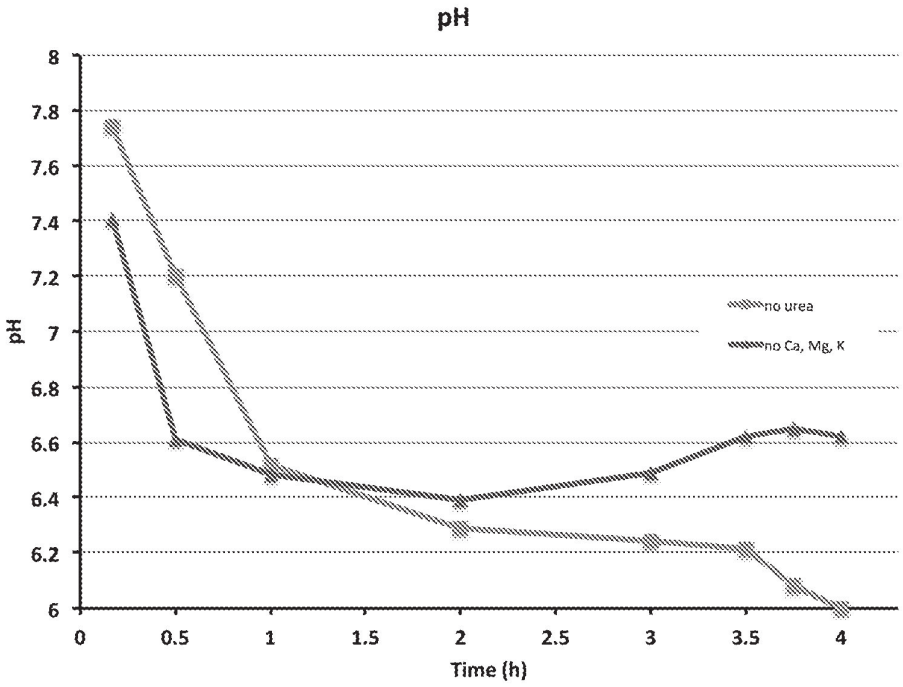

pH
8
7.8
7.6
7.4
7.2
7
6.8
6.6
6.4
6.2
6
pH
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
no urea
no Ca, Mg, K

FIG. 12

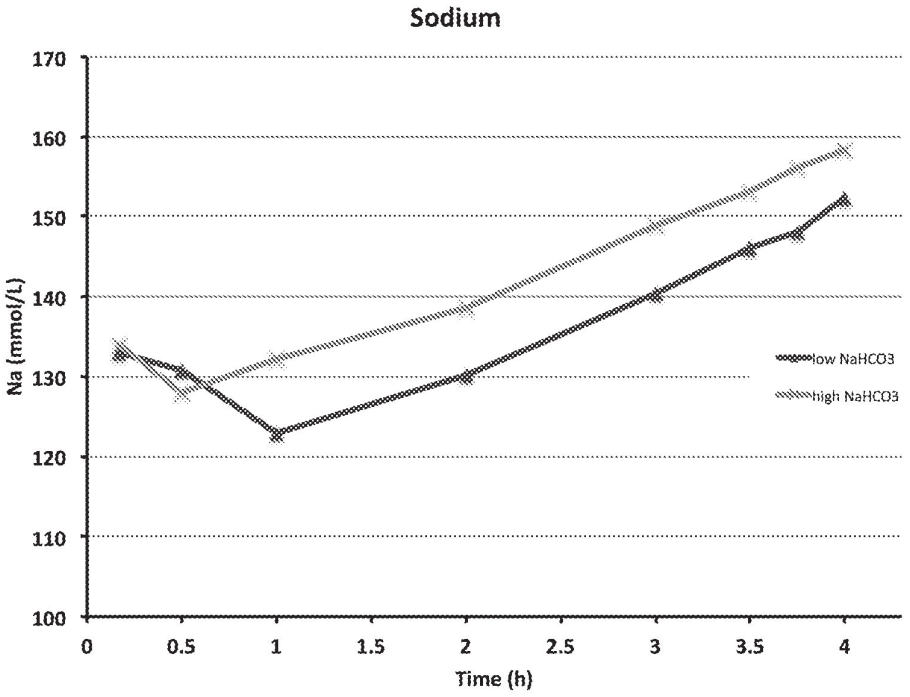

Sodium
170
160
150
140
130
120
110
100
Na (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
low NaHCO3
high NaHCO3

FIG. 13

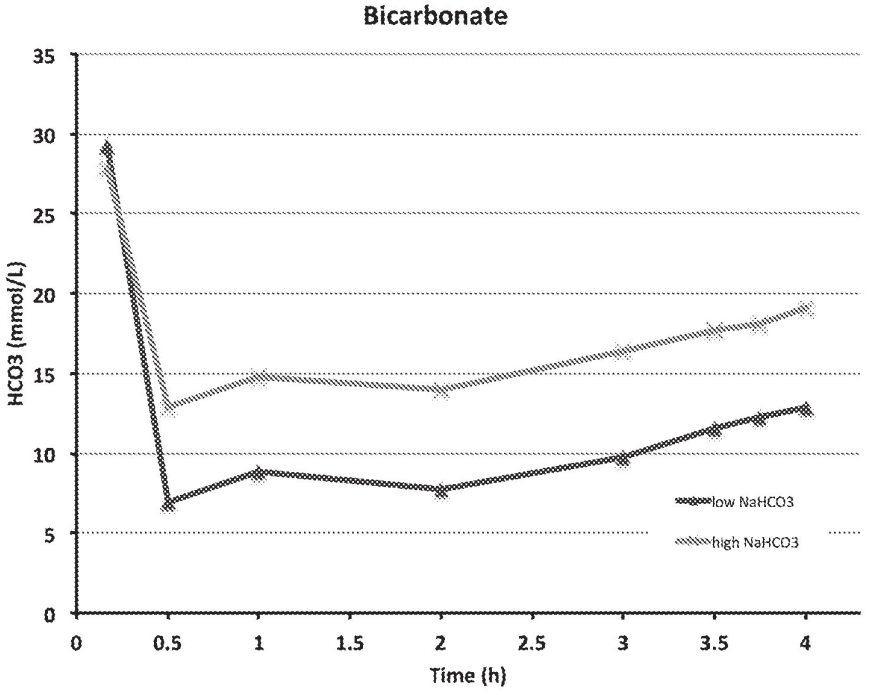

Bicarbonate
35
30
25
20
15
10
5
0
HCO3 (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
low NaHCO3
high NaHCO3

FIG. 14

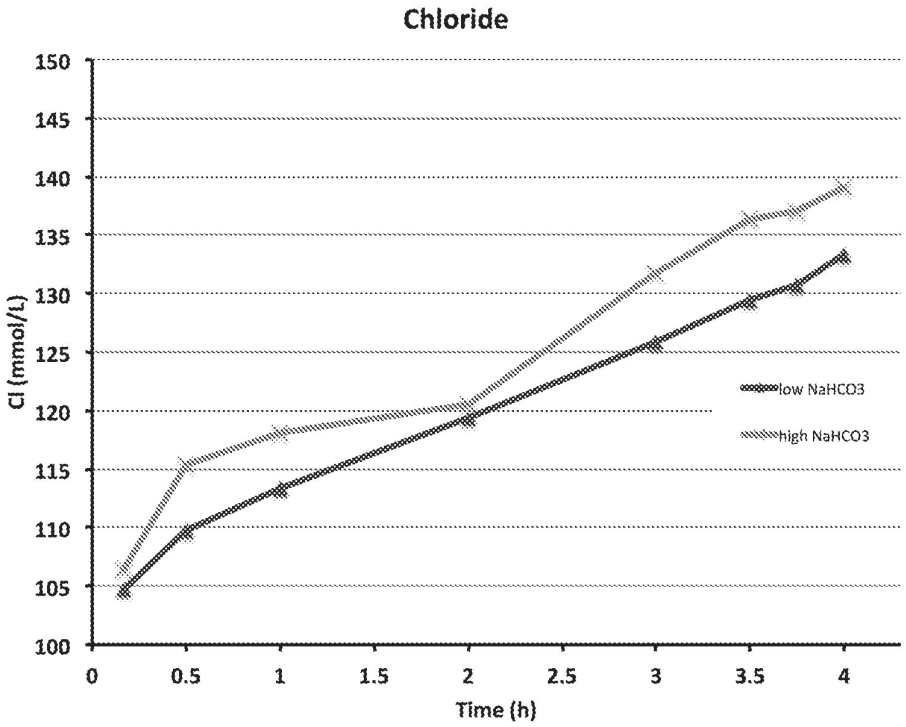

Chloride
150
145
140
135
130
125
120
115
110
105
100
Cl (mmol/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
Time (h)
low NaHCO3
high NaHCO3

FIG. 15

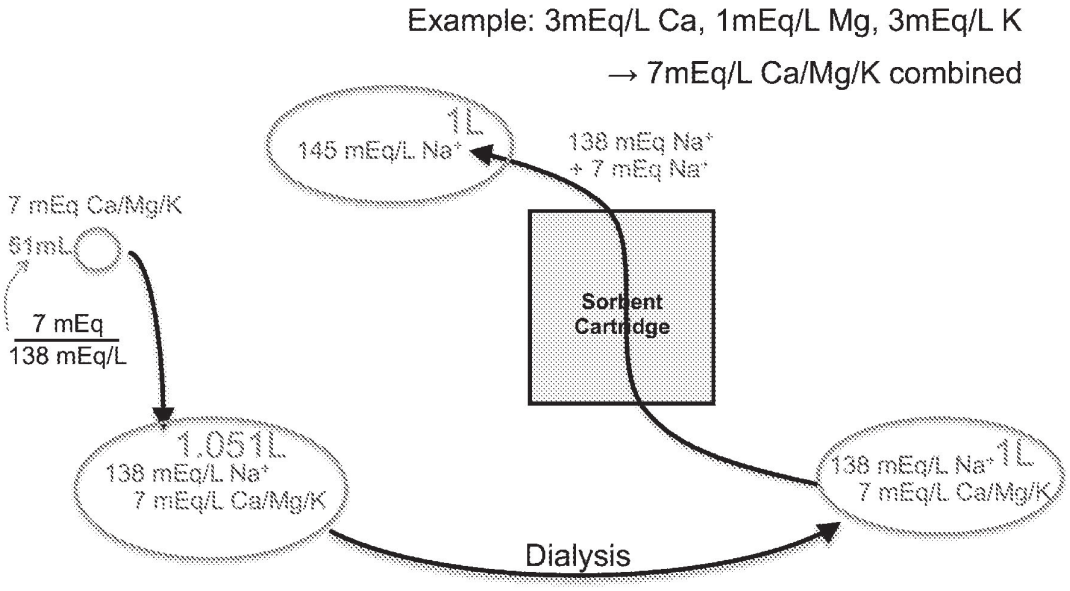

Example: 3mEq/L Ca, 1mEq/L Mg, 3mEq/L K
→ 7mEq/L Ca/Mg/K combined
1L
145 mEq/L Na+
138 mEq Na+
+ 7 mEq Na+
7 mEq Ca/Mg/K
61mL
7 mEq
138 mEq/L
Sorbent
Cartridge
1.051L
138 mEq/L Na+
7 mEq/L Ca/Mg/K
138 mEq/L Na+ 1L
7 mEq/L Ca/Mg/K
Dialysis

FIG. 16