Figure 1

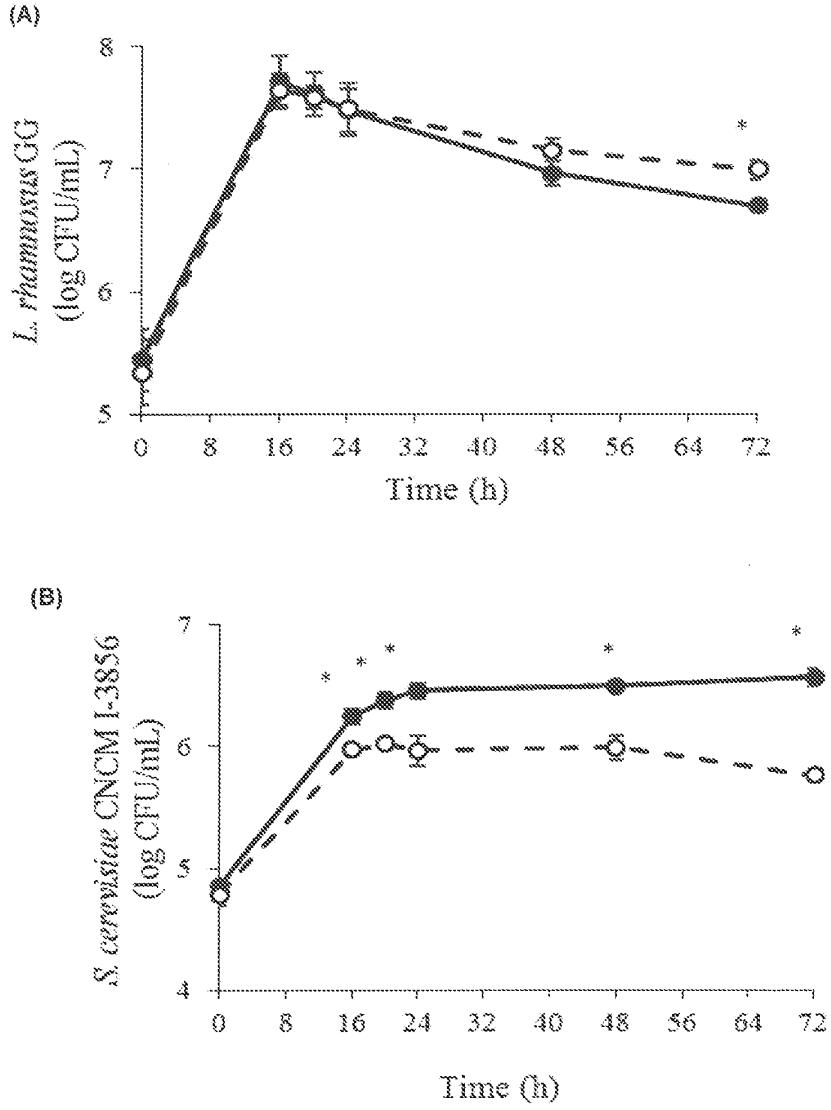
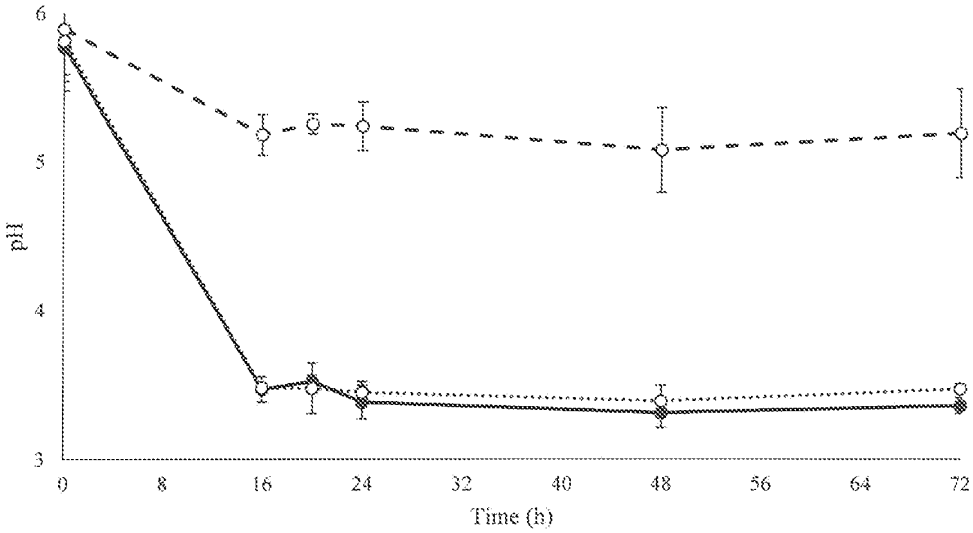

(A)
L. rhamnosus GG (log CFU/mL)
8
7
6
5
0
8
16
24
32
40
48
56
64
72
Time (h)
*
(B)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
0
8
16
24
32
40
48
56
64
72
Time (h)
*
Inoculation with mono-culture of L. rhamnosus GG or S. cerevisiae CNCM I-3856
Inoculation with co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 2



Inoculation with mono-culture of *L. rhamnosus* GG

Inoculation with mono-culture of *S. cerevisiae* CNCM I-3856

Inoculation with co-culture of *L. rhamnosus* GG and *S. cerevisiae* CNCM I-3856

Figure 3

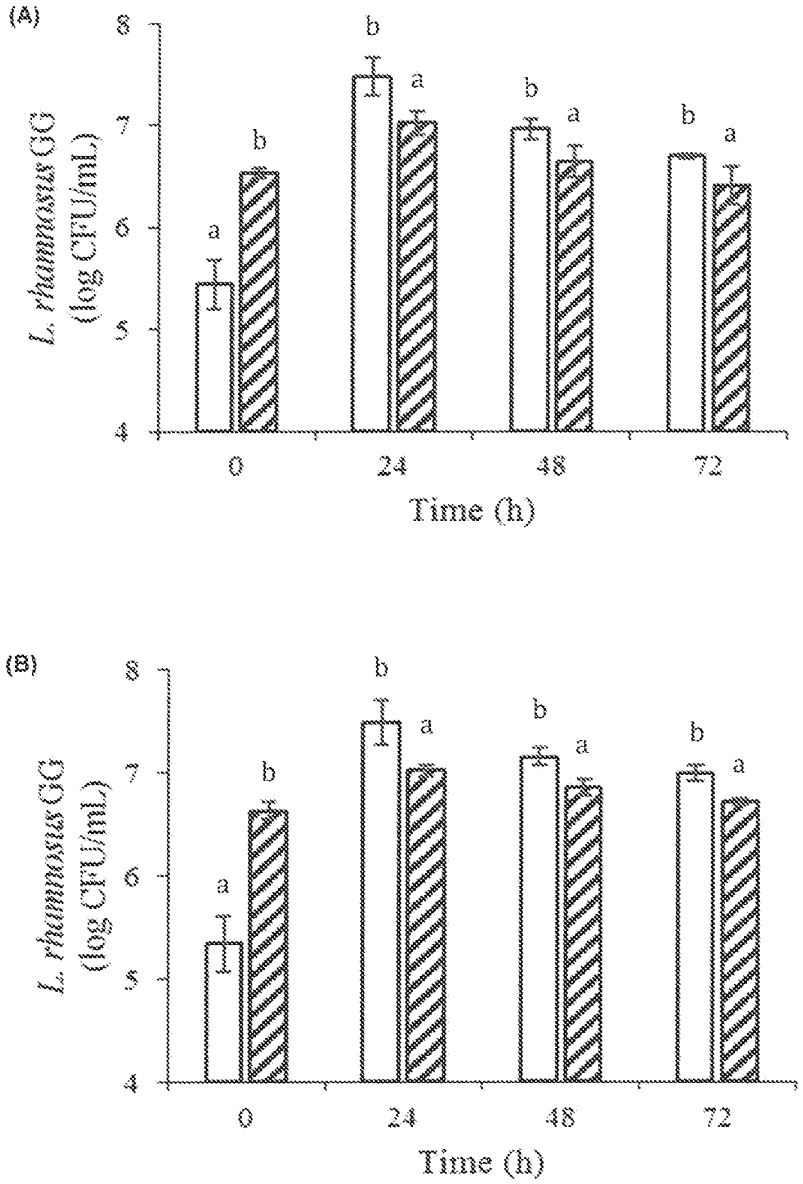

(A)
L. rhamnosus GG (log CFU/mL)
8
7
6
5
4
a
b
b
a
b
a
b
a
0
24
48
72
Time (h)
(B)
L. rhamnosus GG (log CFU/mL)
8
7
6
5
4
a
b
b
a
b
a
b
a
0
24
48
72
Time (h)
Propagation in bread slurry
Propagation in broth

Figure 4

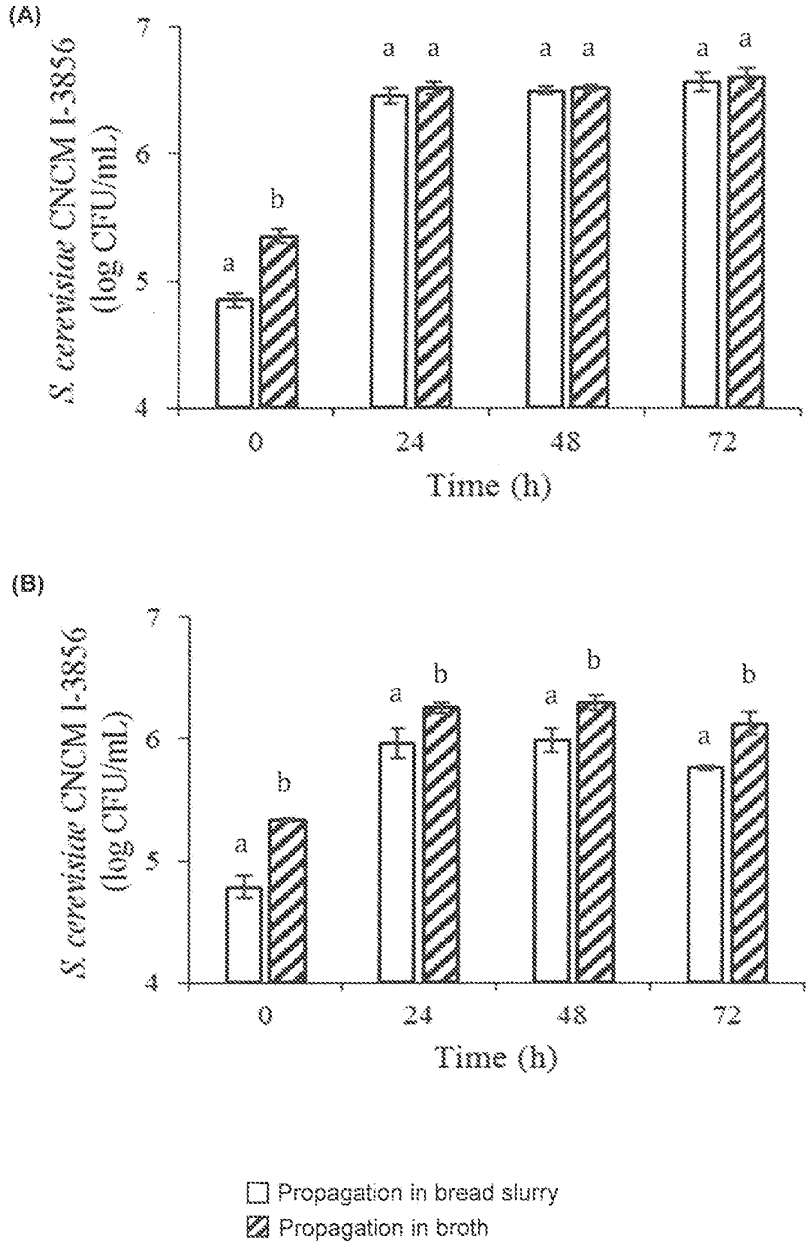

(A)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
a a a a a a
b b
0 24 48 72
Time (h)
(B)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
a b a b a b
a b
0 24 48 72
Time (h)
Propagation in bread slurry
Propagation in broth

Figure 5

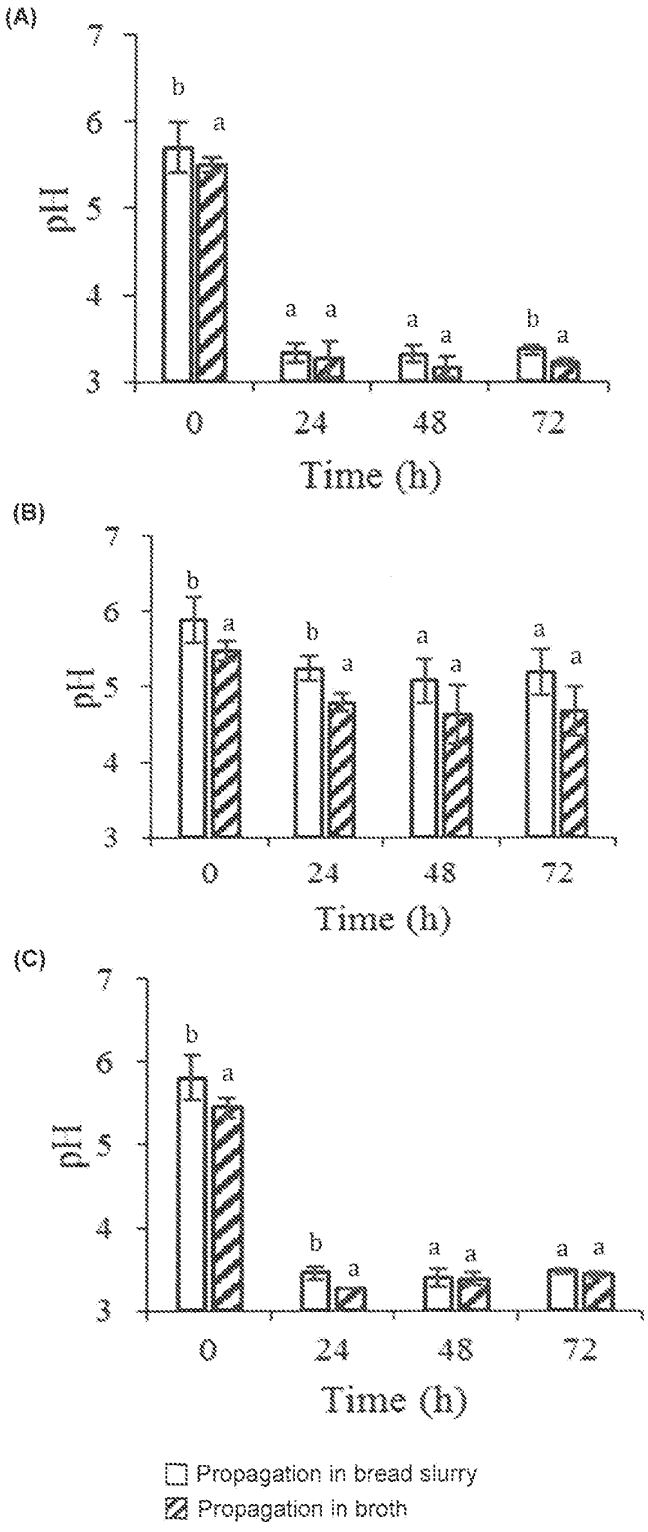

(A)
pH
7
6
5
4
3
b
a
a a
a a
b a
0
24
48
72
Time (h)
(B)
pH
b
a
b
a
a
a
a
a
Time (h)
(C)
pH
b
a
b
a a
a a
Time (h)
Propagation in bread slurry
Propagation in broth

Figure 6

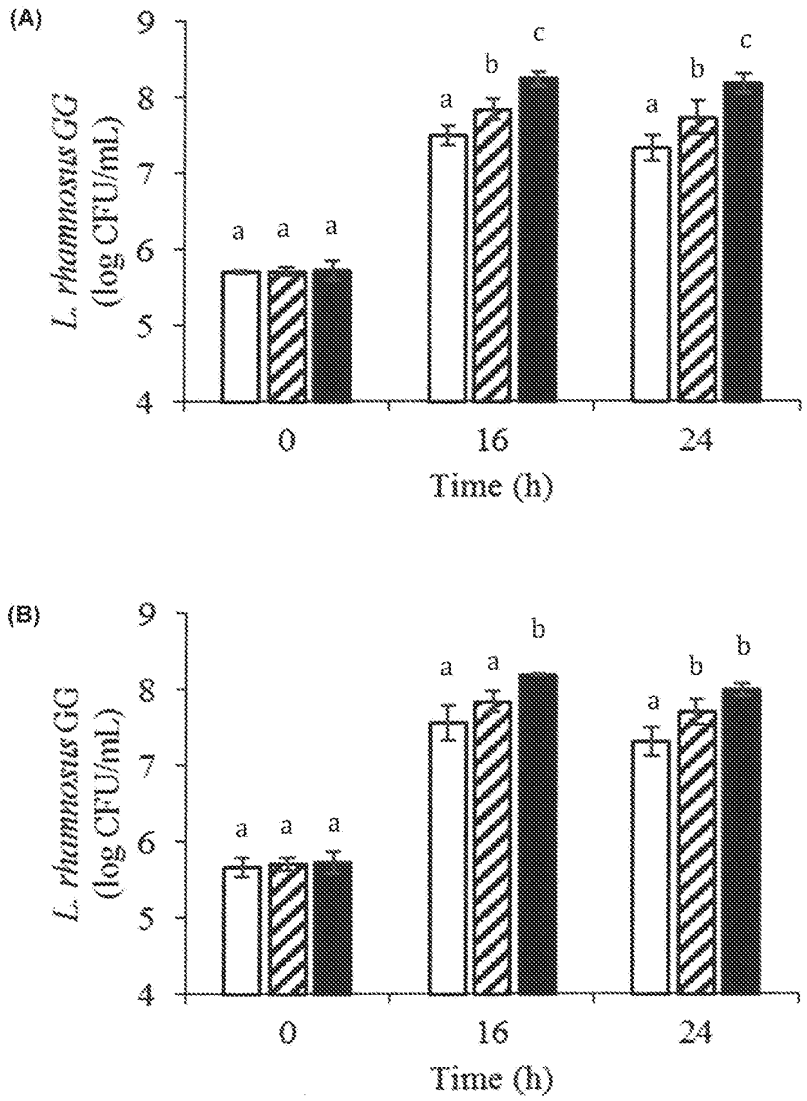

(A)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
a a a
a b c
a b c
0
16
24
Time (h)
(B)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
a a a
a a b
a b b
0
16
24
Time (h)
Total solid bread contents of 1.25 wt. %
Total solid bread contents of 2.5 wt. %
Total solid bread contents of 5.0 wt. %

Figure 7

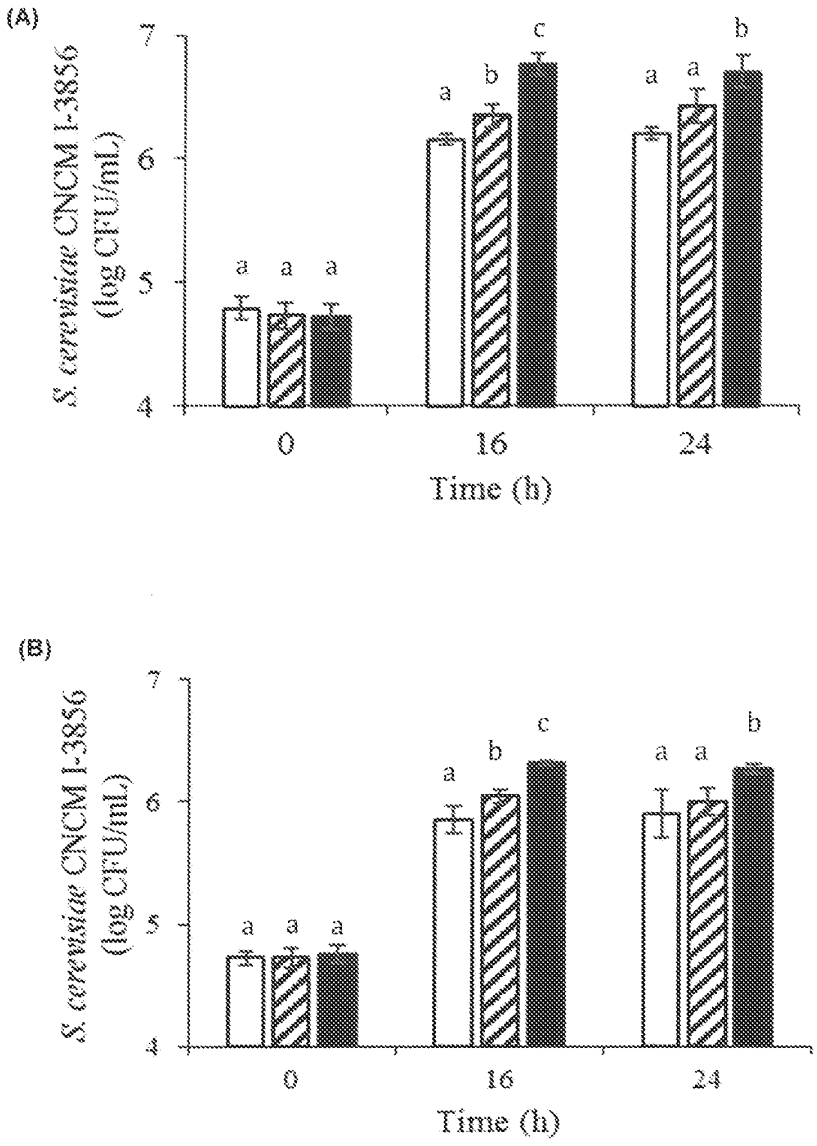

(A)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
a a a
a b c
a a b
0
16
24
Time (h)
(B)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
a a a
a b c
a a b
0
16
24
Time (h)
Total solid bread contents of 1.25 wt. %
Total solid bread contents of 2.5 wt. %
Total solid bread contents of 5.0 wt. %

Figure 8

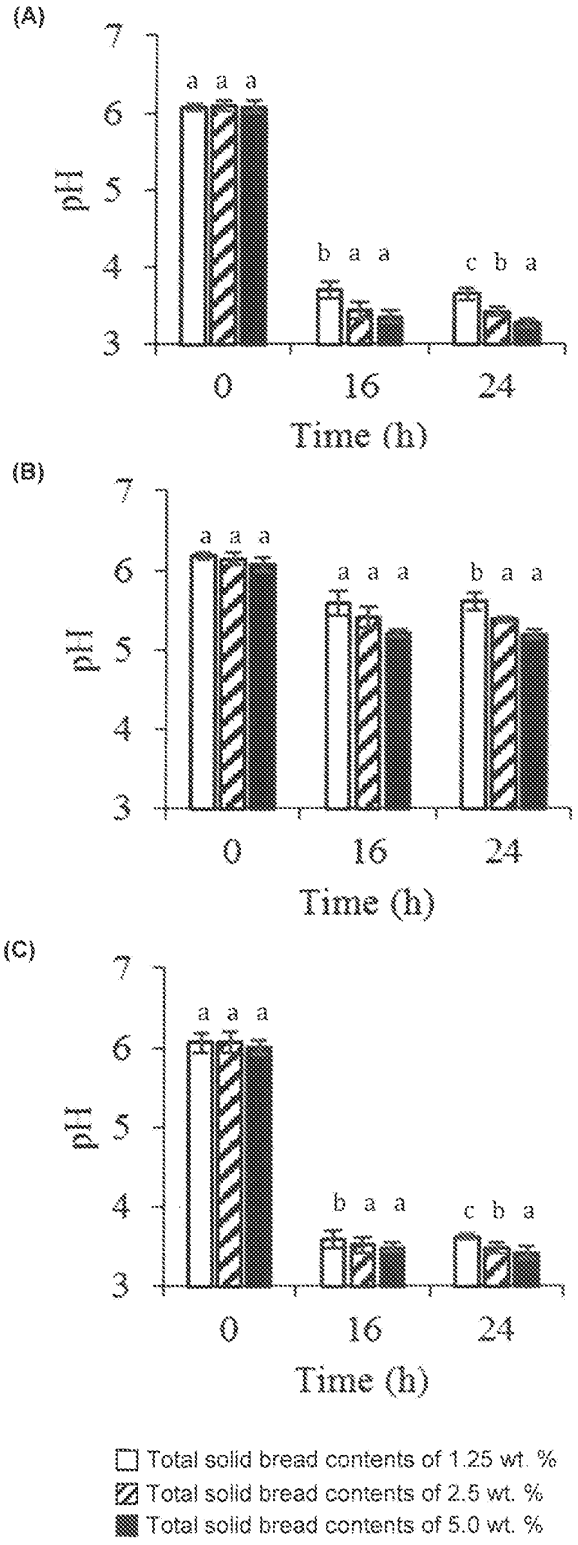

(A)
pH
7
6
5
4
3
a a a
b a a
c b a
0
16
24
Time (h)
(B)
pH
7
6
5
4
3
a a a
a a a
b a a
0
16
24
Time (h)
(C)
pH
7
6
5
4
3
a a a
b a a
c b a
0
16
24
Time (h)
Total solid bread contents of 1.25 wt. %
Total solid bread contents of 2.5 wt. %
Total solid bread contents of 5.0 wt. %

Figure 9

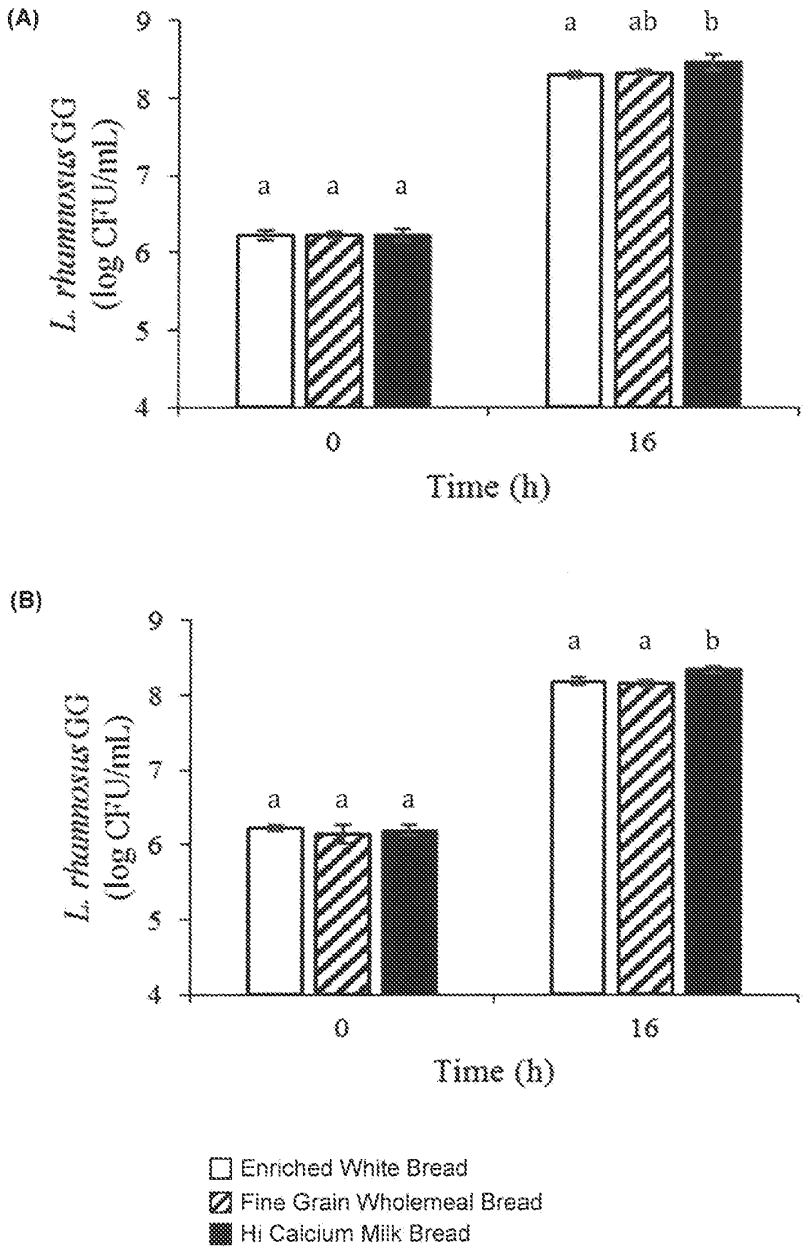

(A)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
a
a
a
a
ab
b
0
16
Time (h)
(B)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
a
a
a
a
a
b
0
16
Time (h)
Enriched White Bread
Fine Grain Wholemeal Bread
Hi Calcium Milk Bread

Figure 10

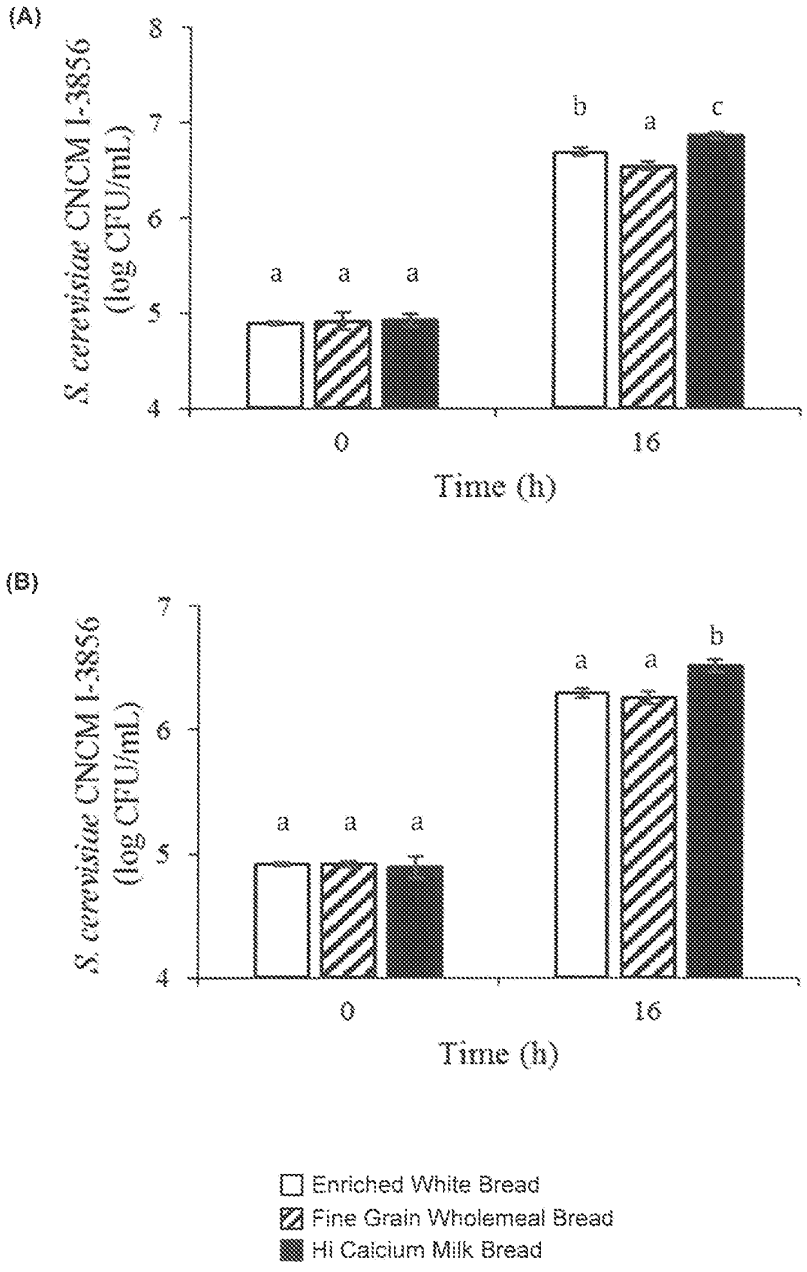

(A)
S. cerevisiae CNCM I-3856 (log CFU/mL)
8
7
6
5
4
a a a
b a c
0
16
Time (h)
(B)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
a a a
a a b
0
16
Time (h)
Enriched White Bread
Fine Grain Wholemeal Bread
Hi Calcium Milk Bread

Figure 11

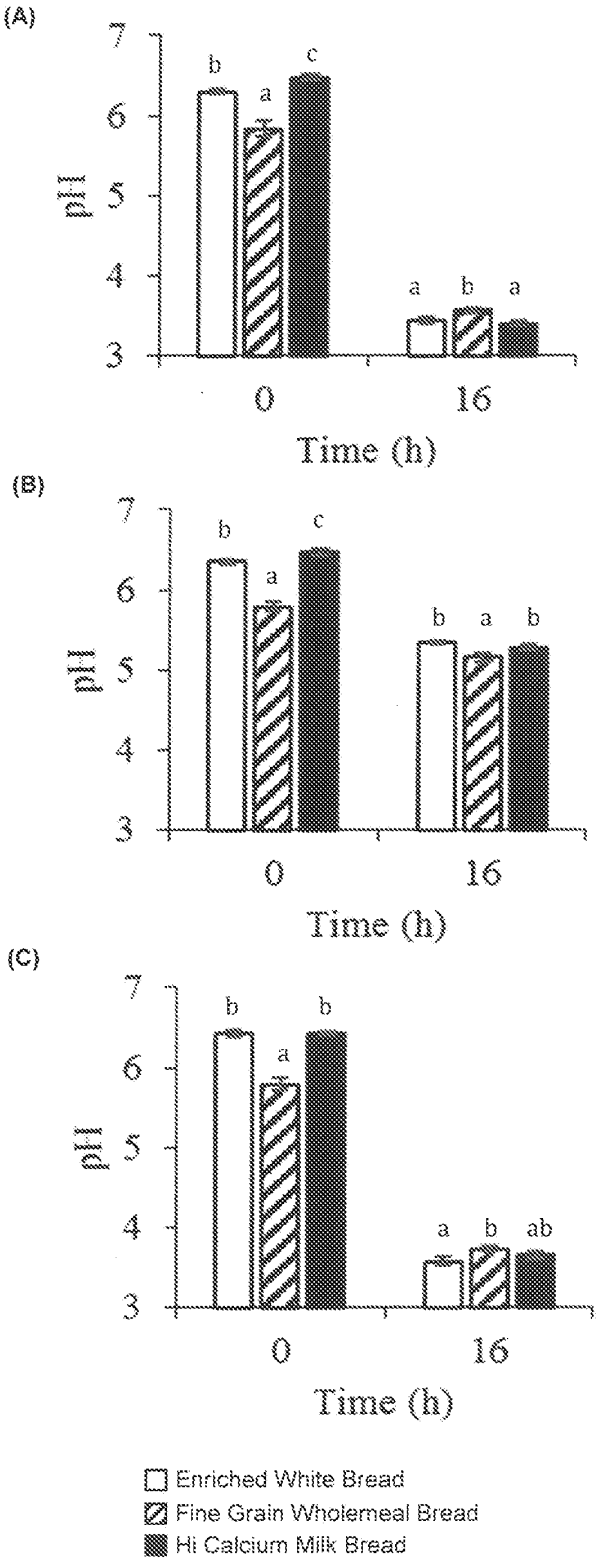

(A)
pH
7
6
5
4
3
b
a
c
a
b
a
0
16
Time (h)
(B)
pH
7
6
5
4
3
b
a
c
b
a
b
0
16
Time (h)
(C)
pH
7
6
5
4
3
b
a
b
a
b
ab
0
16
Time (h)
Enriched White Bread
Fine Grain Wholemeal Bread
Hi Calcium Milk Bread

Figure 12

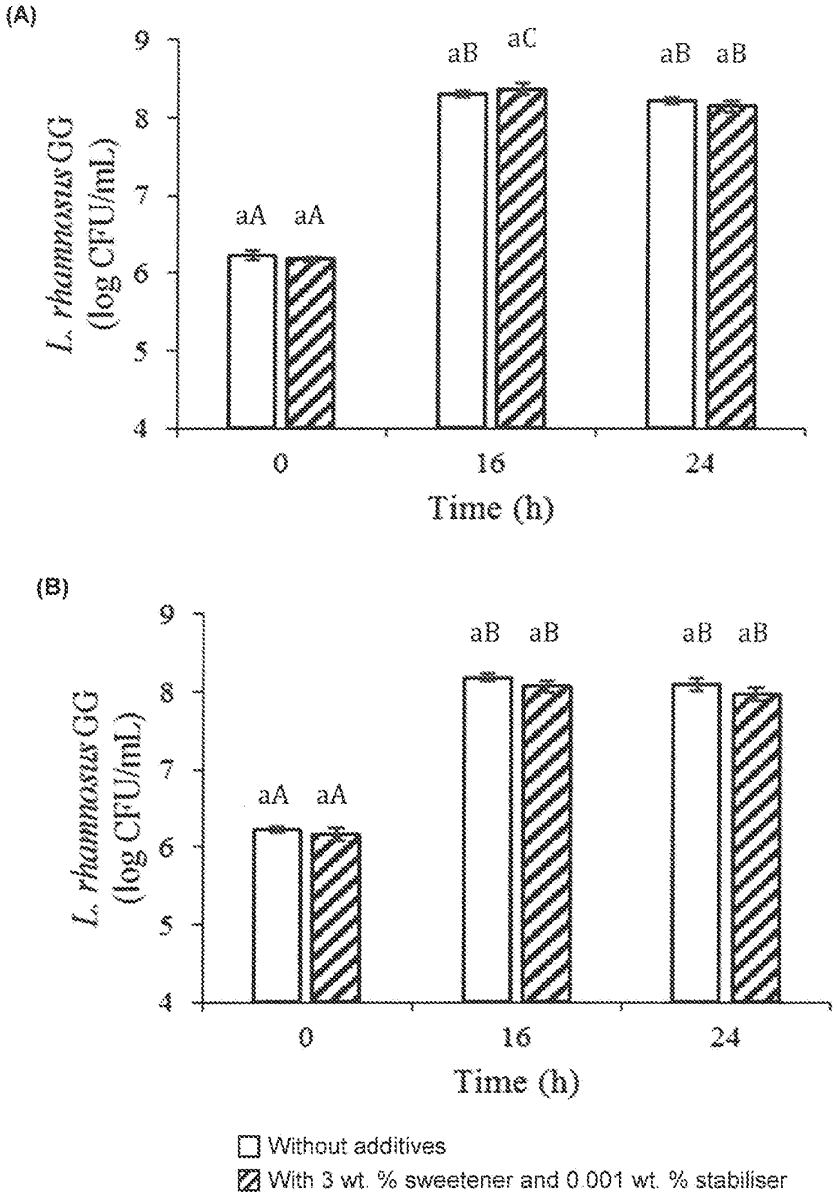

(A)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
aA aA
aB aC
aB aB
0
16
24
Time (h)
(B)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
aA aA
aB aB
aB aB
0
16
24
Time (h)
Without additives
With 3 wt. % sweetener and 0.001 wt. % stabiliser

Figure 13

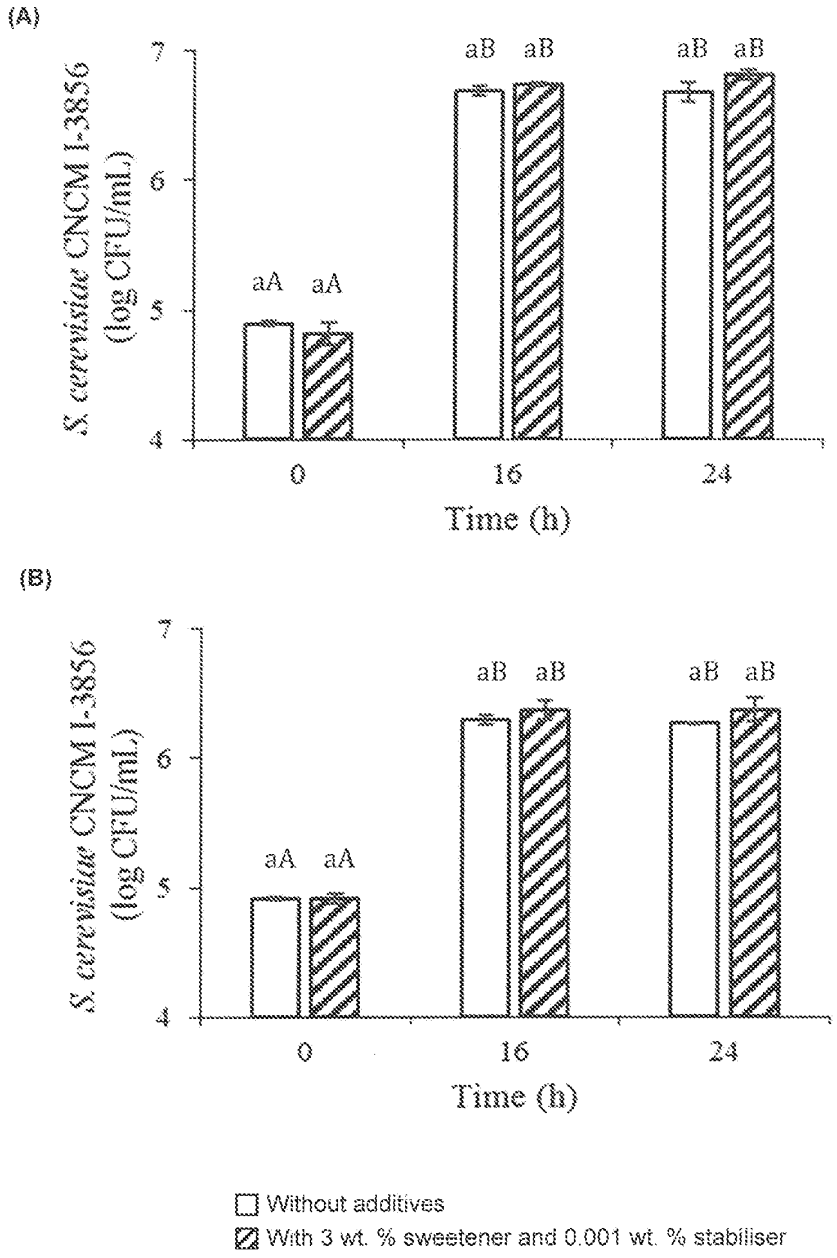

(A)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
aA aA
aB aB
aB aB
0
16
24
Time (h)
(B)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
aA aA
aB aB
aB aB
0
16
24
Time (h)
Without additives
With 3 wt. % sweetener and 0.001 wt. % stabiliser

Figure 14

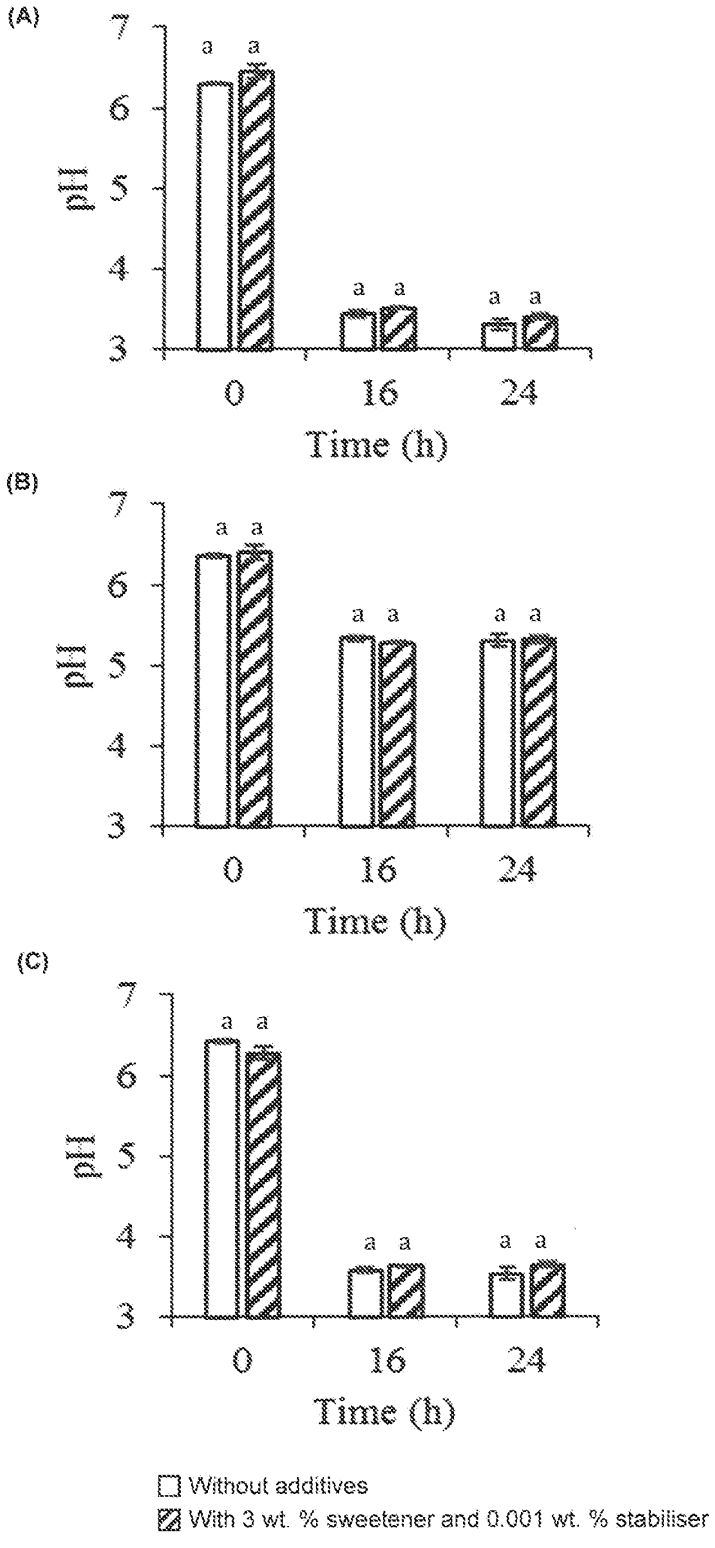

(A)
pH
7
6
5
4
3
a a
a a
a a
0
16
24
Time (h)
(B)
pH
7
6
5
4
3
a a
a a
a a
0
16
24
Time (h)
(C)
pH
7
6
5
4
3
a a
a a
a a
0
16
24
Time (h)
Without additives
With 3 wt. % sweetener and 0.001 wt. % stabiliser

Figure 15

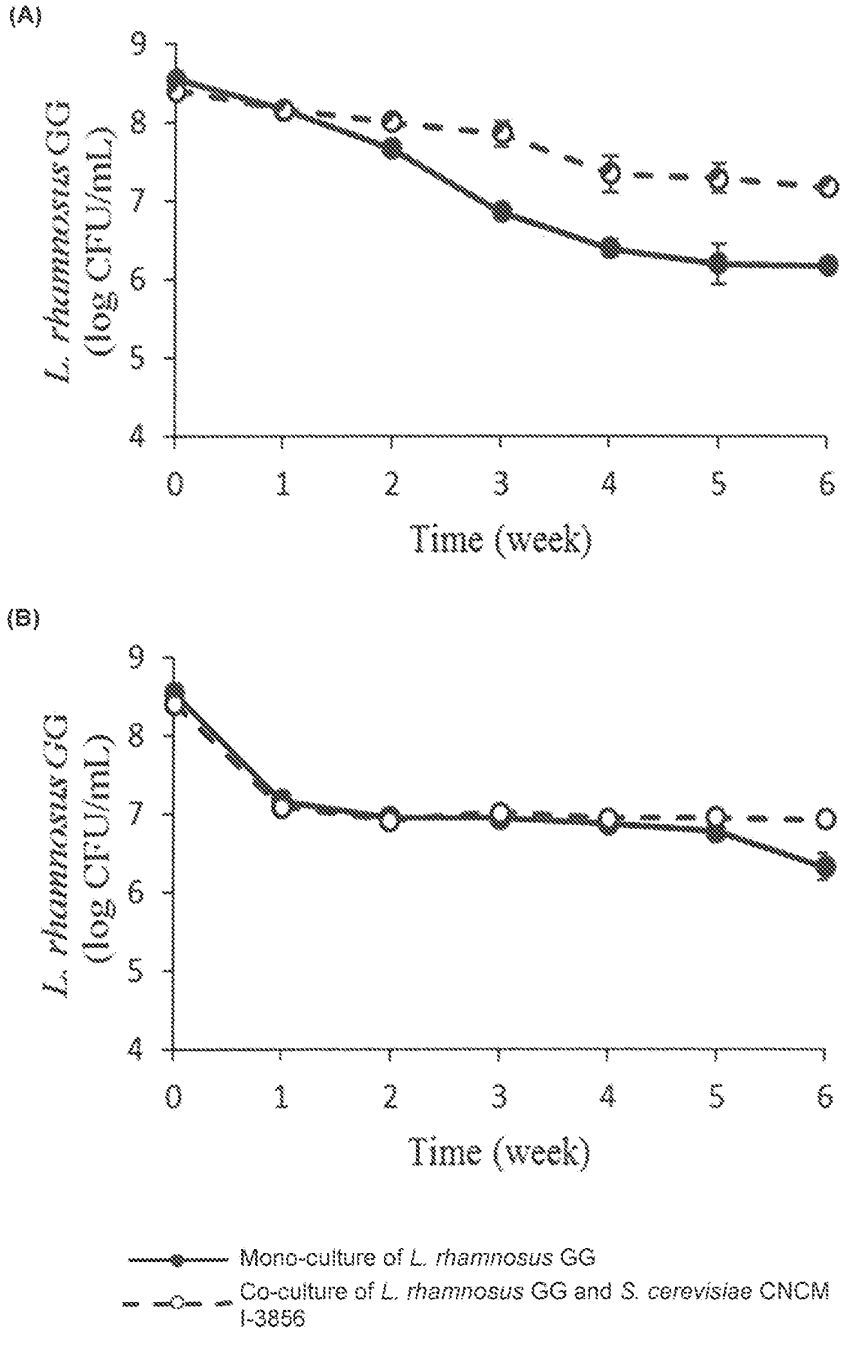

(A)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
0
1
2
3
4
5
6
Time (week)
(B)
L. rhamnosus GG (log CFU/mL)
9
8
7
6
5
4
0
1
2
3
4
5
6
Time (week)
Mono-culture of L. rhamnosus GG
Co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 16

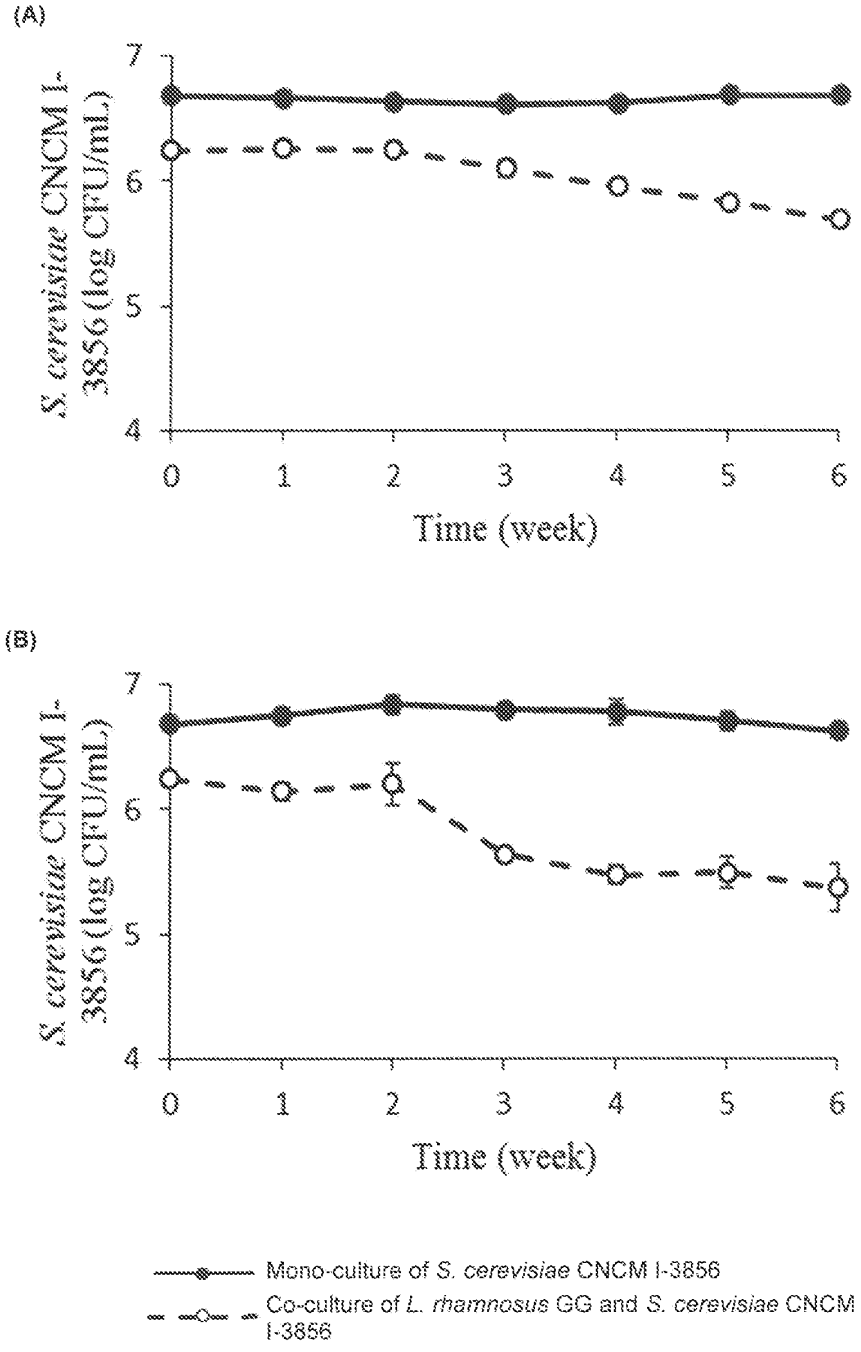

(A)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
0
1
2
3
4
5
6
Time (week)
(B)
S. cerevisiae CNCM I-3856 (log CFU/mL)
7
6
5
4
0
1
2
3
4
5
6
Time (week)
Mono-culture of S. cerevisiae CNCM I-3856
Co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 17

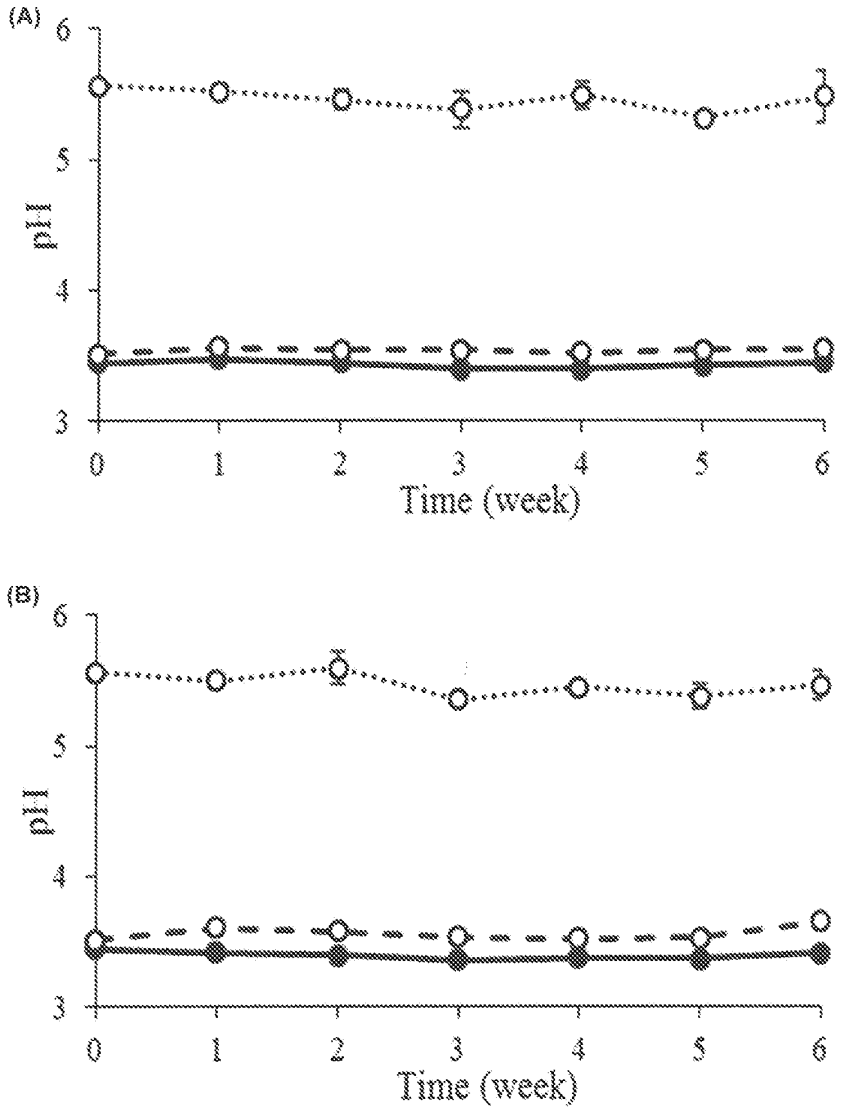

(A)
6
5
4
3
pH
0
1
2
3
4
5
6
Time (week)
(B)
6
5
4
3
pH
0
1
2
3
4
5
6
Time (week)
Mono-culture of L. rhamnosus GG
Mono-culture of S. cerevisiae CNCM I-3856
Co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 18

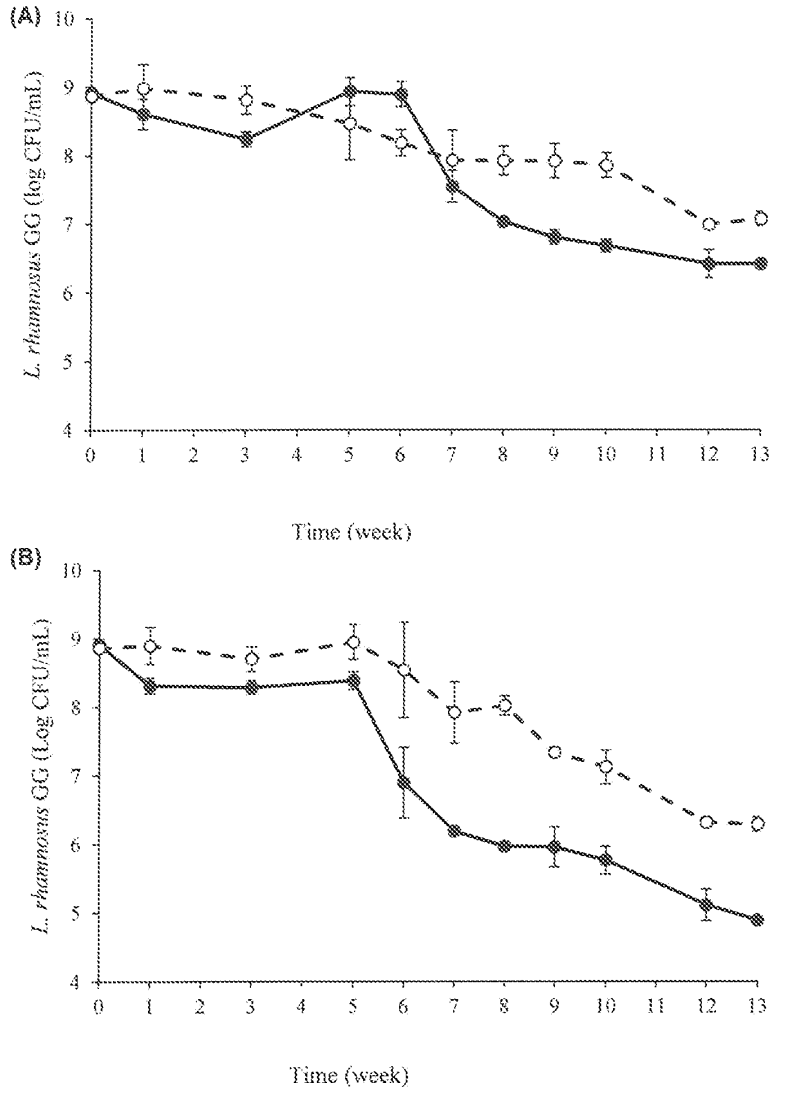

(A)
L. rhamnosus GG (log CFU/mL)
Time (week)
(B)
L. rhamnosus GG (Log CFU/mL)
Time (week)
Mono-culture of L. rhamnosus GG
Co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 19

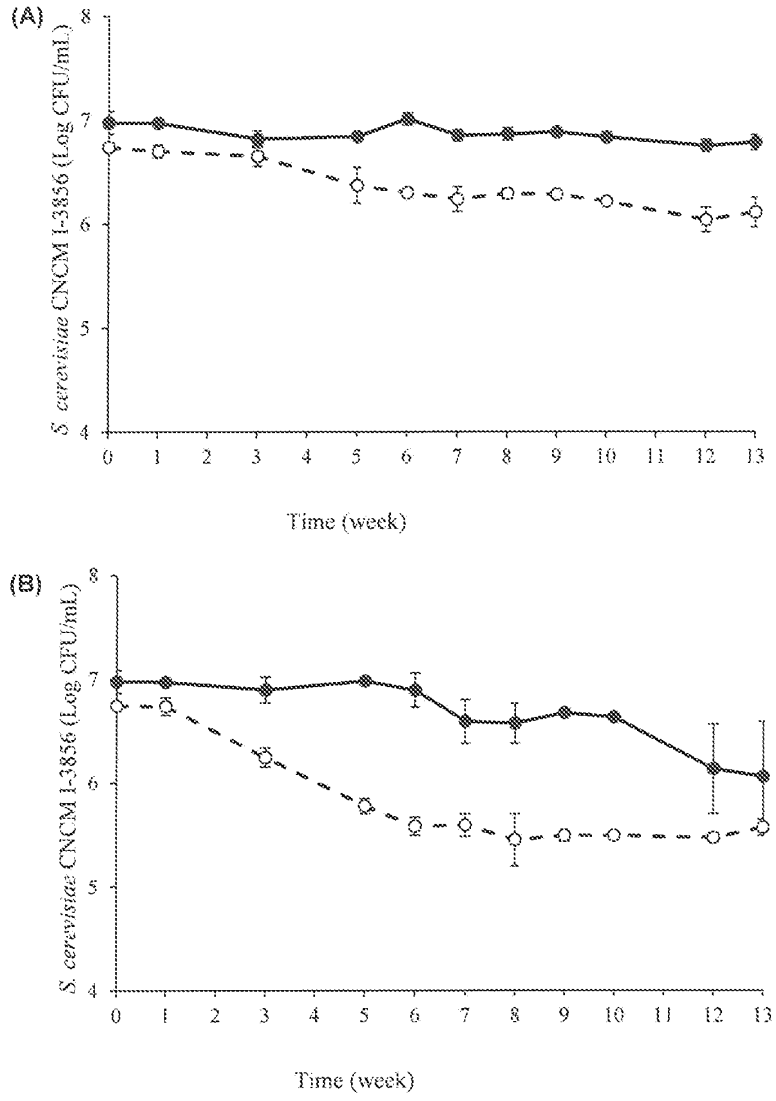

(A)
S. cerevisiae CNCM I-3856 (Log CFU/mL)
Time (week)
(B)
S. cerevisiae CNCM I-3856 (Log CFU/mL)
Time (week)
Mono-culture of S. cerevisiae CNCM I-3856
Co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 20

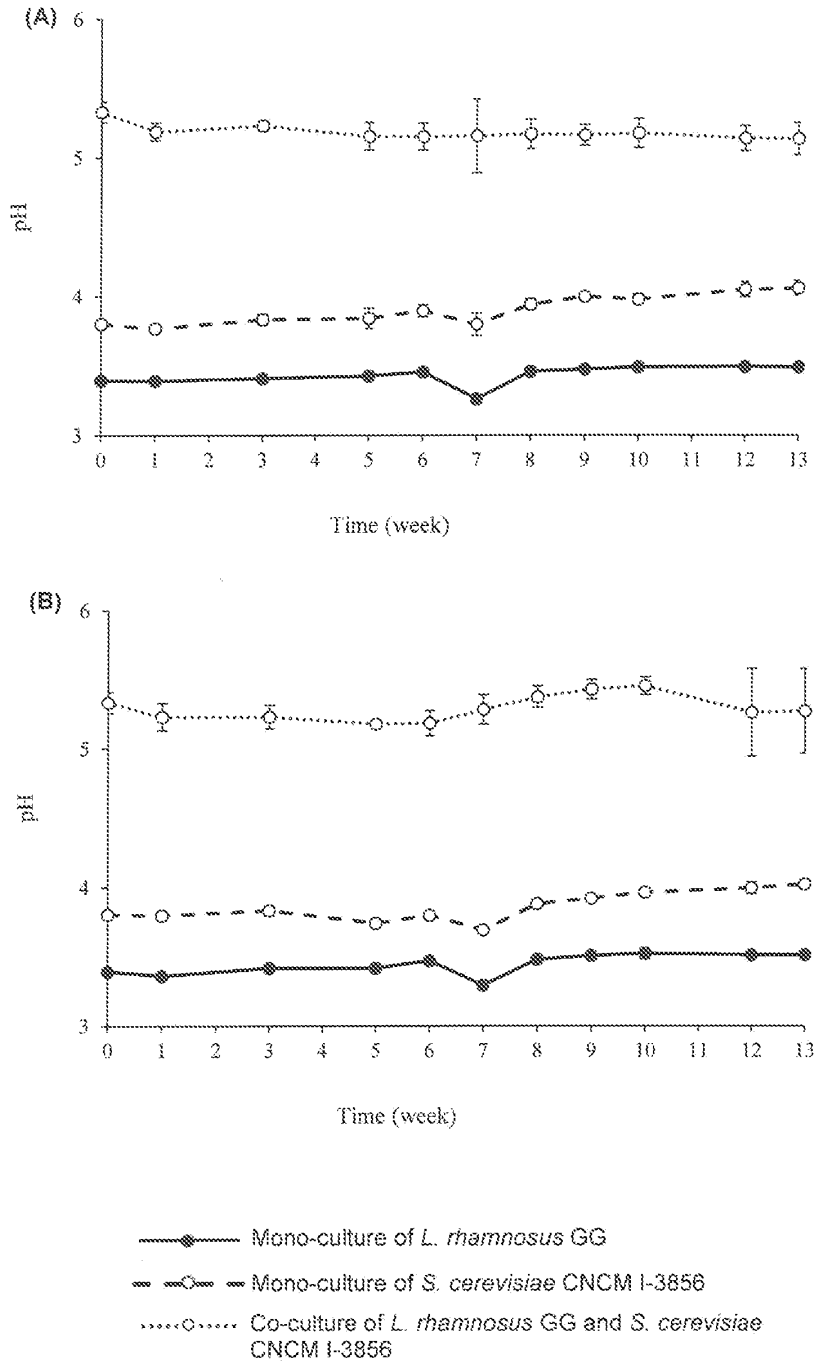

(A)
pH
Time (week)
(B)
pH
Time (week)
Mono-culture of L. rhamnosus GG
Mono-culture of S. cerevisiae CNCM I-3856
Co-culture of L. rhamnosus GG and S. cerevisiae CNCM I-3856

Figure 21

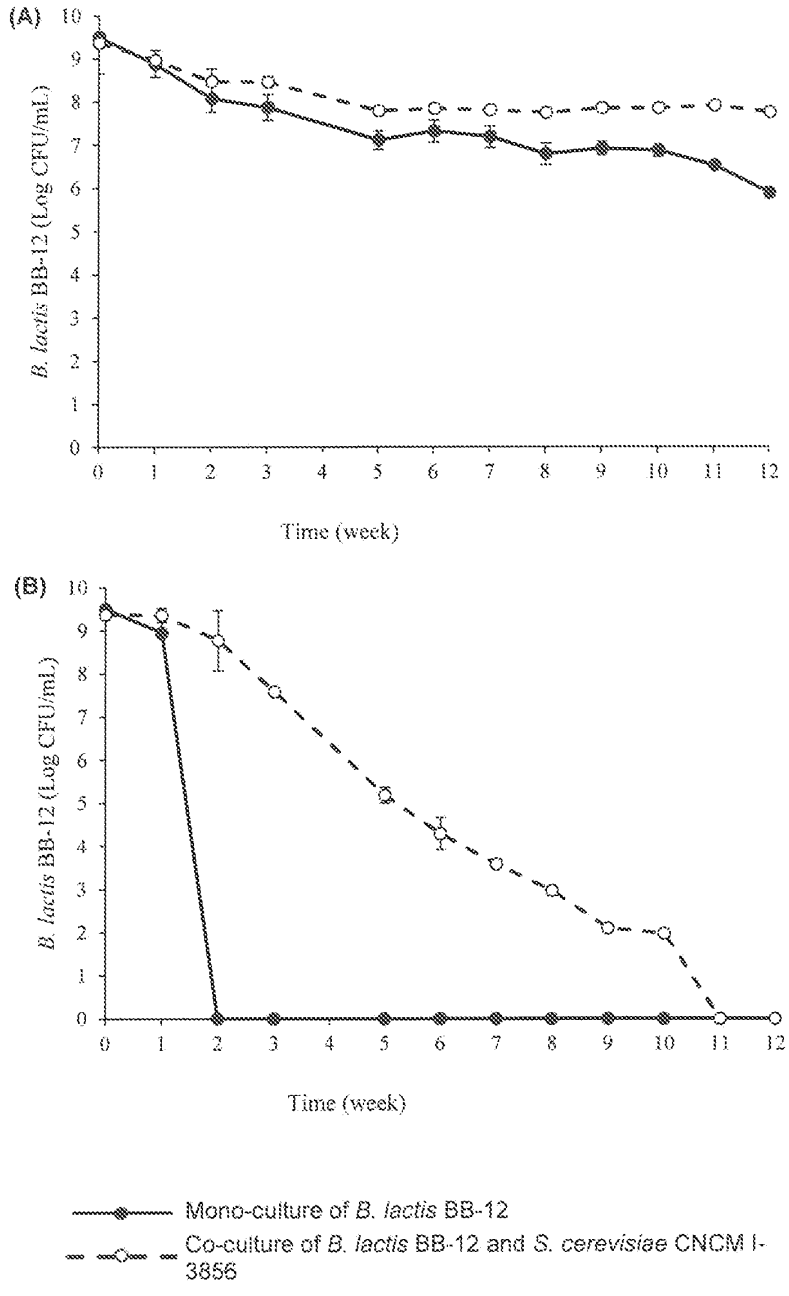
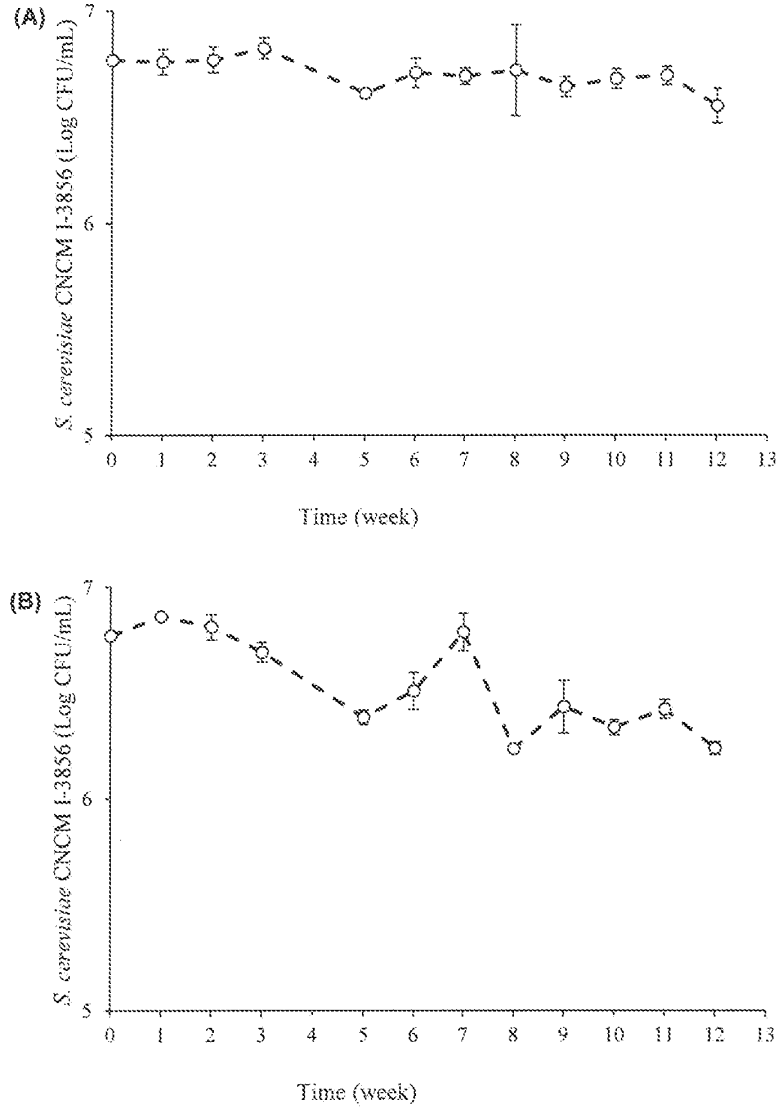

(A)
B. lactis BB-12 (Log CFU/mL)
Time (week)
(B)
B. lactis BB-12 (Log CFU/mL)
Time (week)
Mono-culture of B. lactis BB-12
Co-culture of B. lactis BB-12 and S. cerevisiae CNCM I-3856

Figure 22


(A)
S. cerevisiae CNCM I-3856 (Log CFU/mL)
7
6
5
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Time (week)
(B)
S. cerevisiae CNCM I-3856 (Log CFU/mL)
7
6
5
0 1 2 3 4 5 6 7 8 9 10 11 12 13
Time (week)
Co-culture of B. lactis BB-12 and S. cerevisiae CNCM I-3856