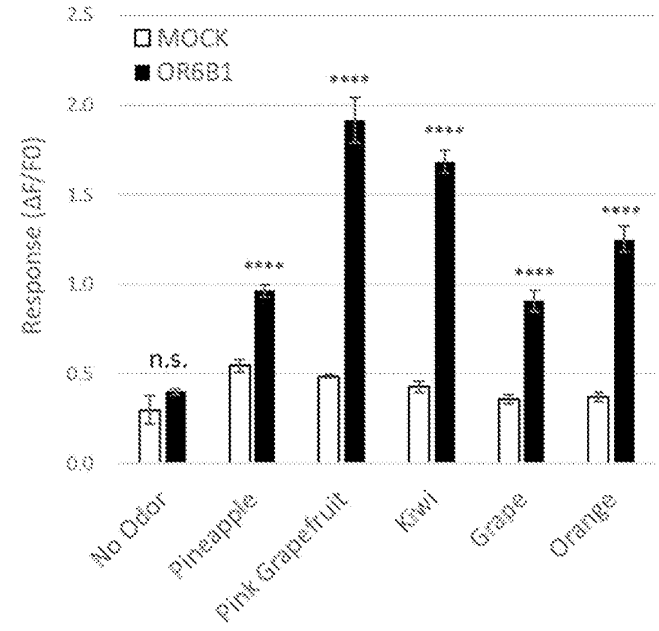
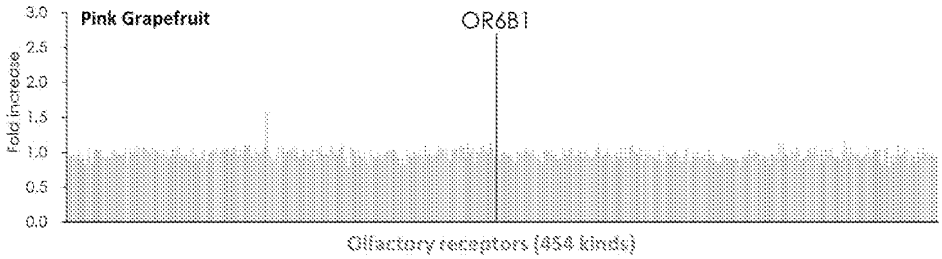
[図1]

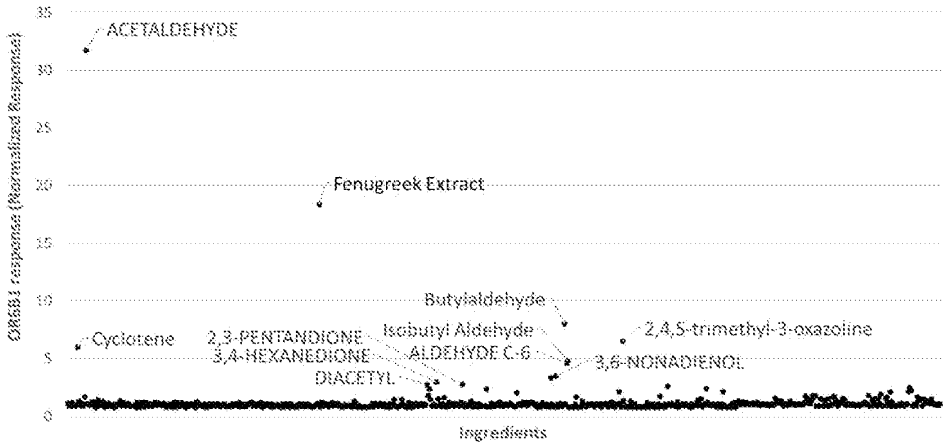
a)


MOCK
OR6B1
Response (ΔF/F0)
2.5
2.0
1.5
1.0
0.5
0.0
n.s.
****
No Odor
Pineapple
Pink Grapefruit
Kiwi
Grape
Orange

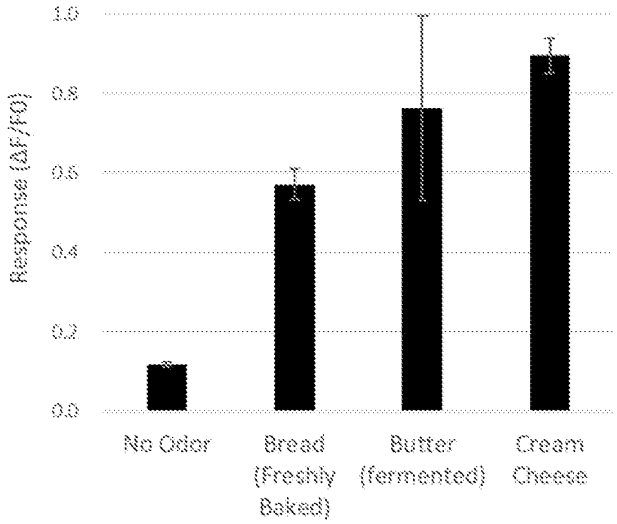
b)


Pink Grapefruit
OR6B1
Fold increase
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Olfactory receptors (454 kinds)

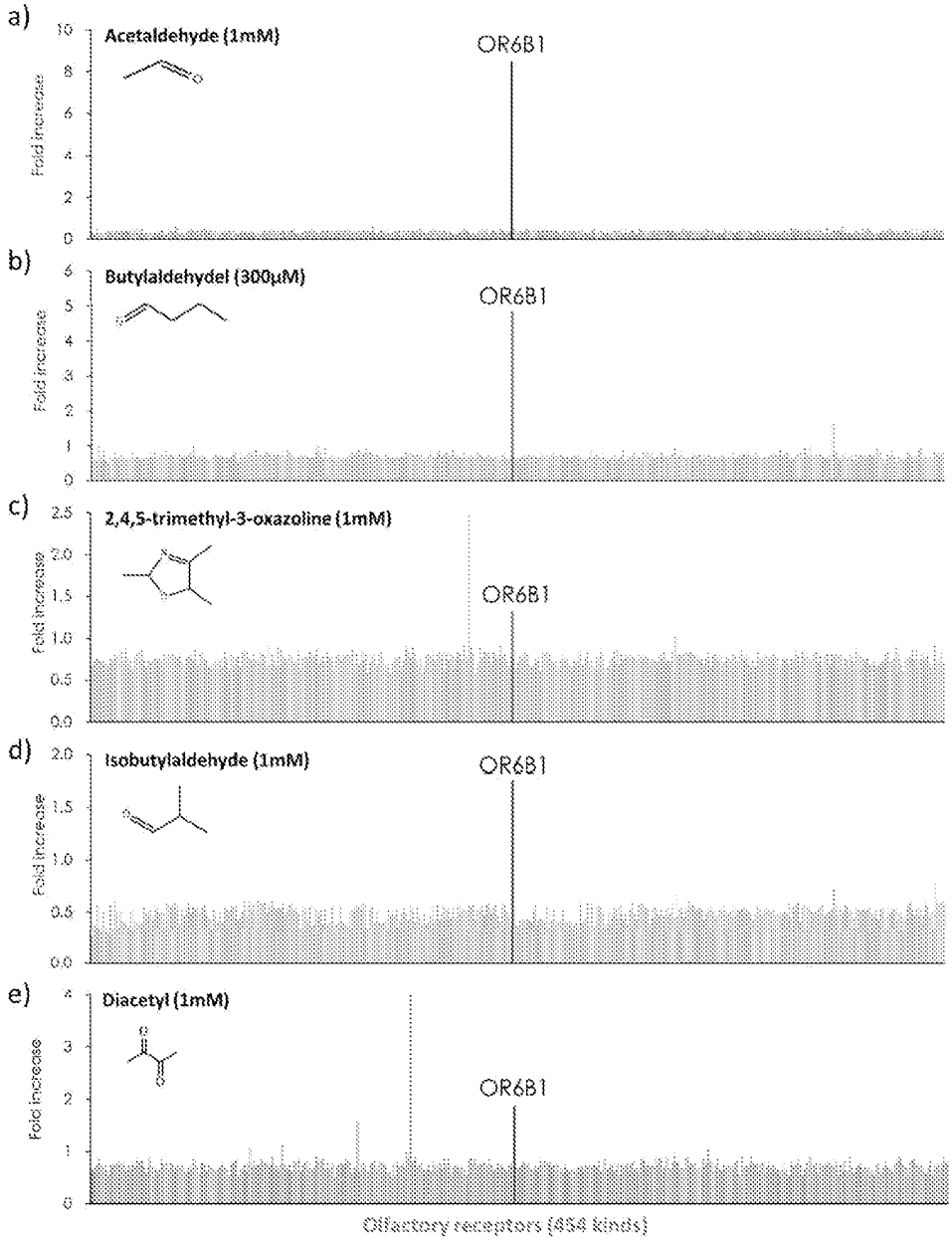
[図2]


OR6B1 response (Normalized Response)
35
30
25
20
15
10
5
0
ACETALDEHYDE
Fenugreek Extract
Butylaldehyde
Cyclotene
2,3-PENTANDIONE
3,4-HEXANEDIONE
DIACETYL
Isobutyl Aldehyde
ALDEHYDE C-6
2,4,5-trimethyl-3-oxazoline
3,6-NONADIENOL
Ingredients

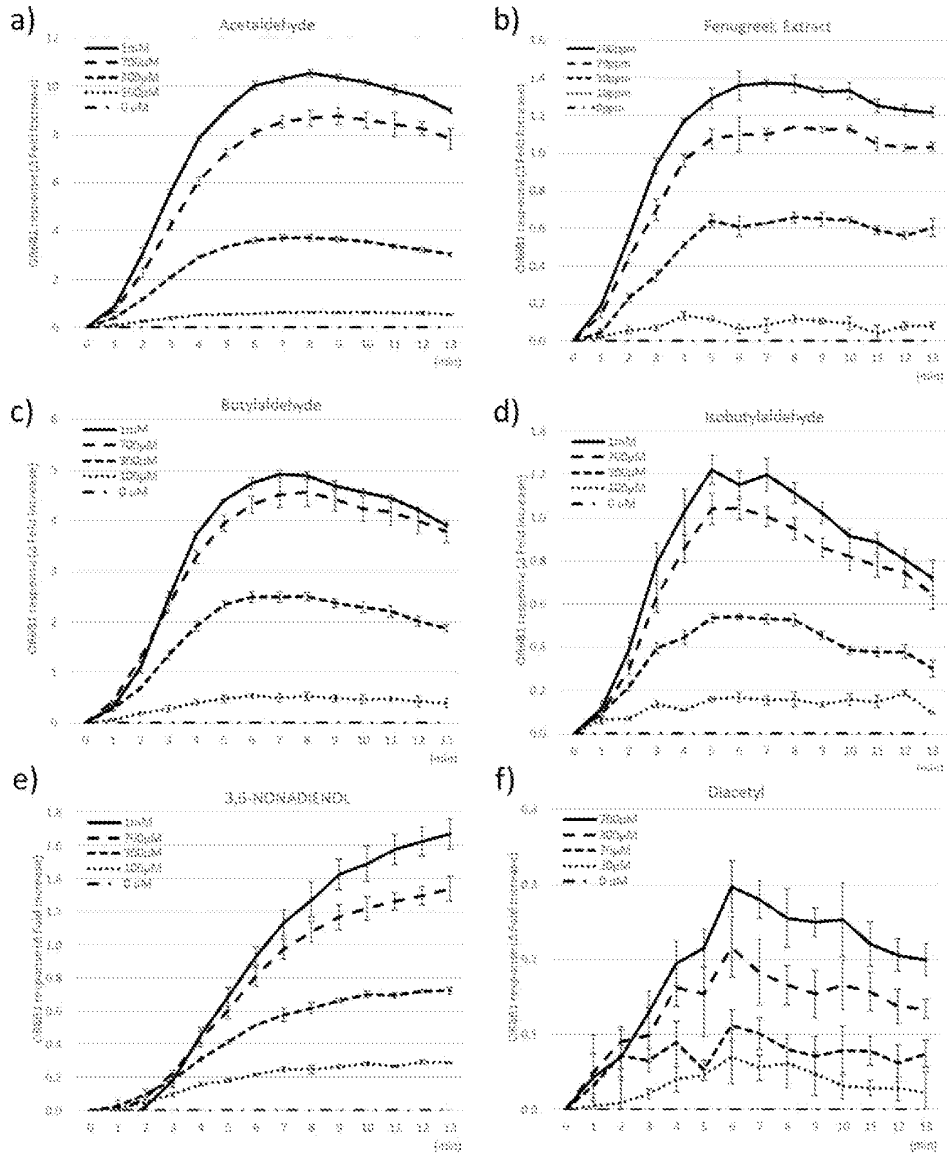
[図3]


1.0
0.8
0.6
0.4
0.2
0.0
Response (ΔF/F0)
No Odor
Bread (Freshly Baked)
Butter (fermented)
Cream Cheese

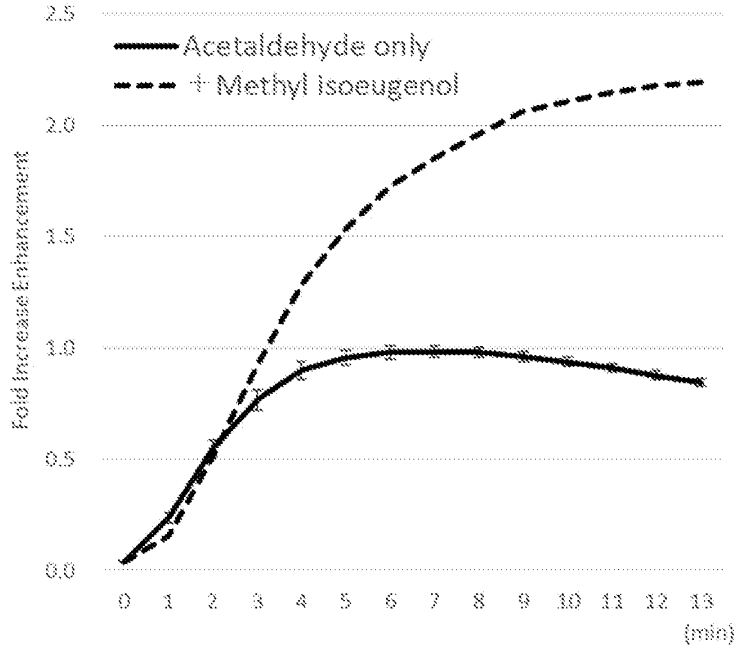
[図4]


a)
Acetaldehyde (1mM)
OR6B1
Fold increase
b)
Butylaldehydel (300μM)
OR6B1
Fold increase
c)
2,4,5-trimethyl-3-oxazoline (1mM)
OR6B1
Fold increase
d)
Isobutylaldehyde (1mM)
OR6B1
Fold increase
e)
Diacetyl (1mM)
OR6B1
Fold increase
Olfactory receptors (454 kinds)

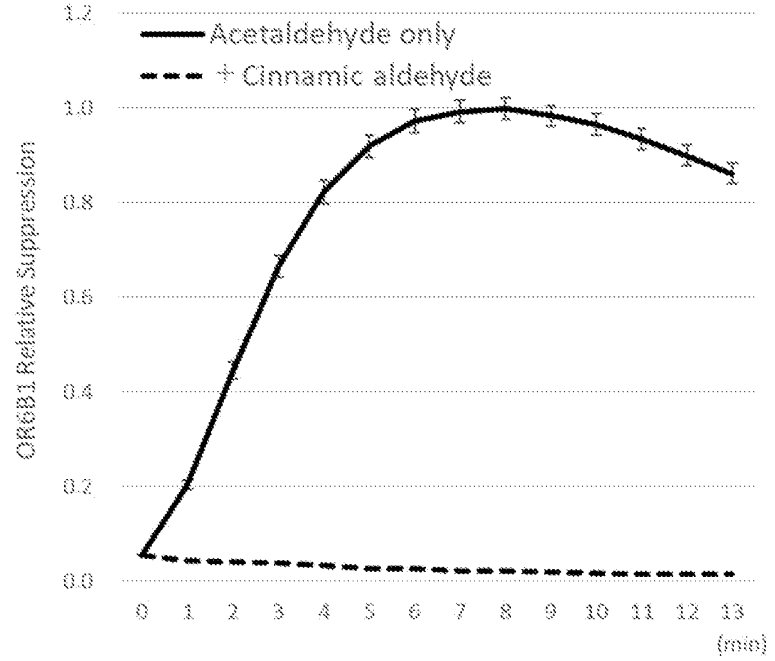
[図5]


a)
Acetaldehyde
b)
Fenugreek Extract
c)
Butyraldehyde
d)
Isobutylaldehyde
e)
3,6-NONADIENOL
f)
Diacetyl

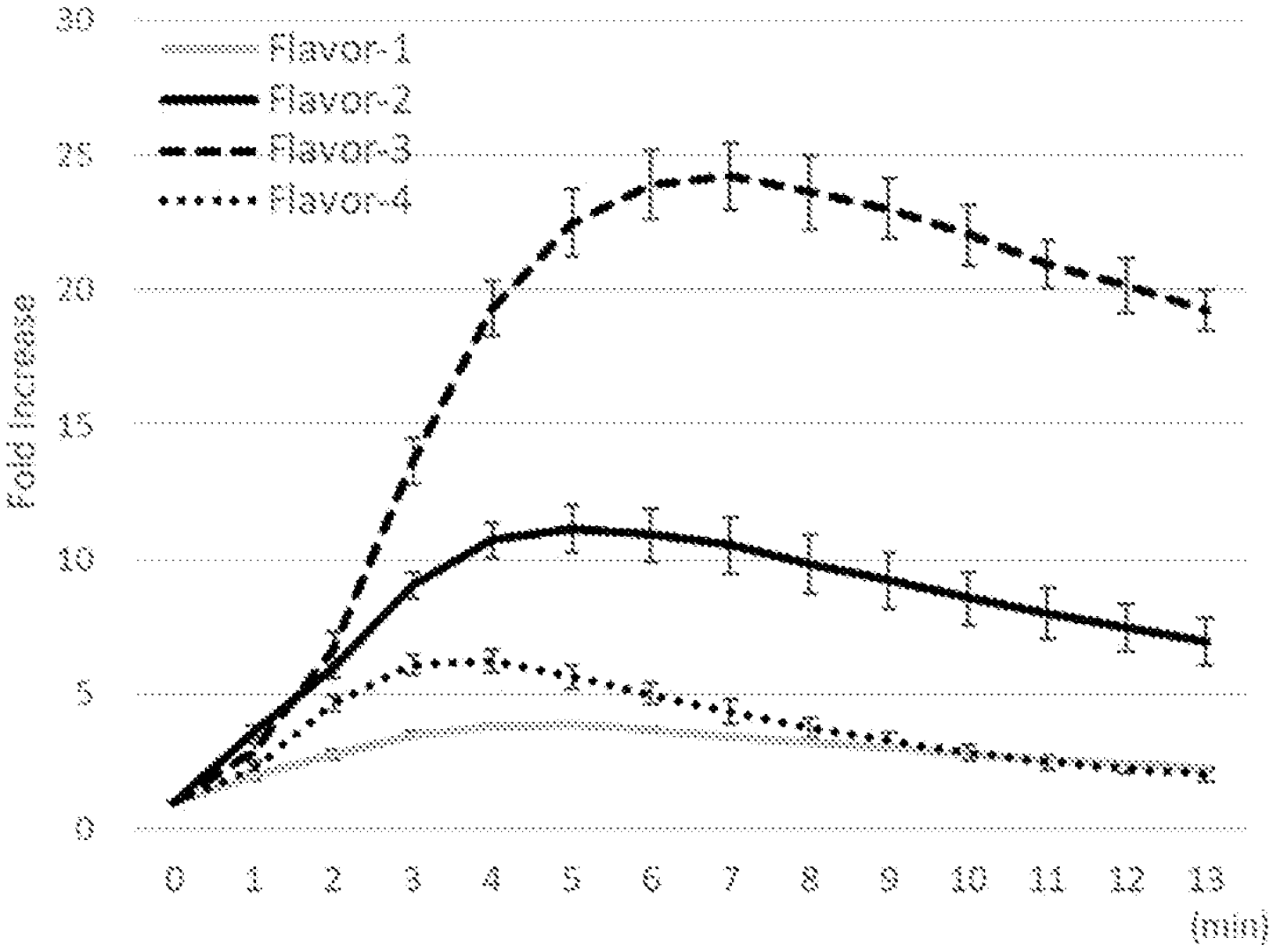
[図6]


Acetaldehyde only
＋Methyl isoeugenol
Fold Increase Enhancement
2.5
2.0
1.5
1.0
0.5
0.0
0 1 2 3 4 5 6 7 8 9 10 11 12 13
(min)

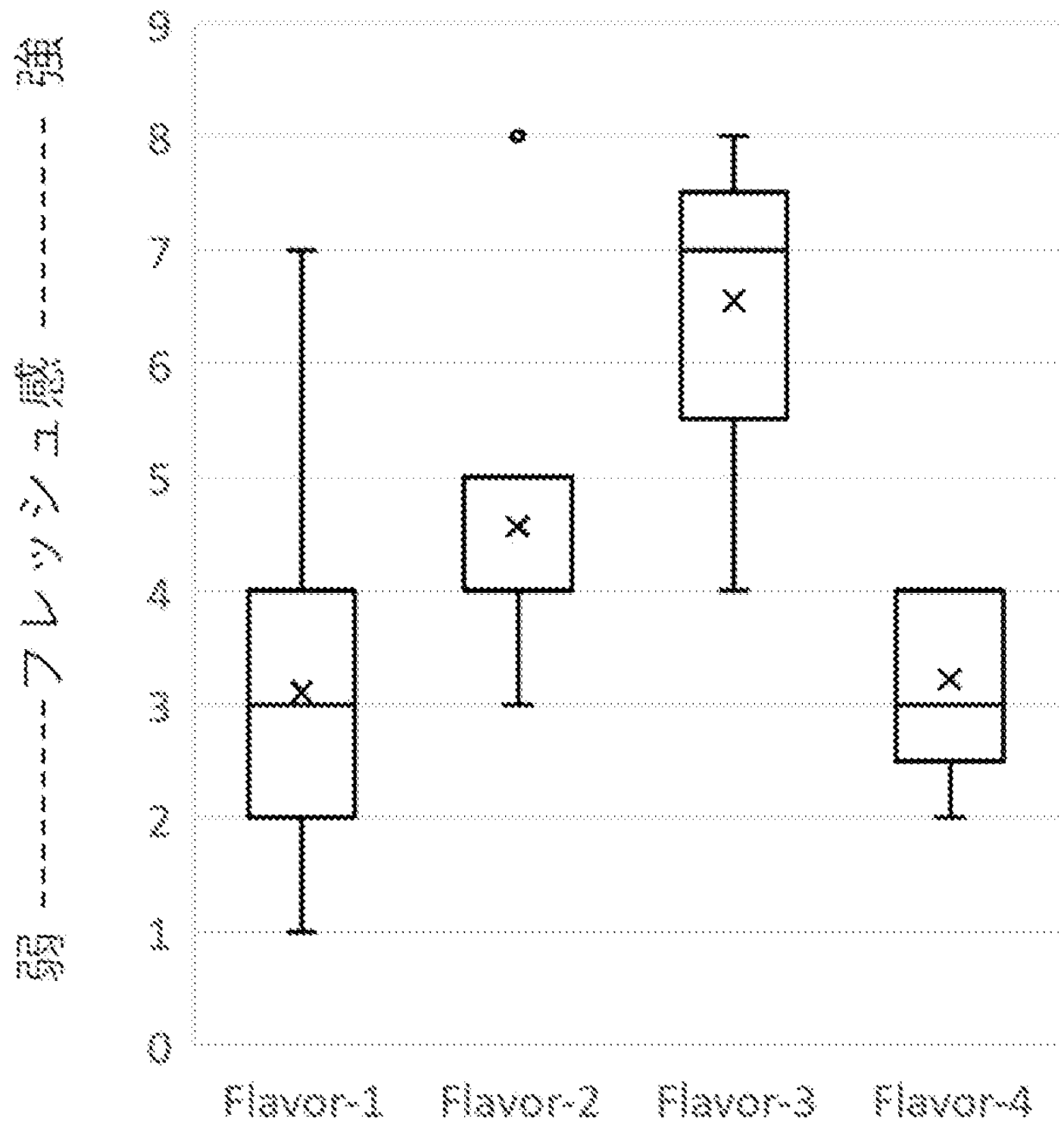
[図7]


Acetaldehyde only
＋Cinnamic aldehyde
OR6B1 Relative Suppression
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0 1 2 3 4 5 6 7 8 9 10 11 12 13
(min)

[図8]


Flavor-1
Flavor-2
Flavor-3
Flavor-4
Fold Increase
30
25
20
15
10
5
0
0 1 2 3 4 5 6 7 8 9 10 11 12 13
(min)

[図9]


弱 ---------- フレッシュ感 ---------- 強
9
8
7
6
5
4
3
2
1
0
Flavor-1
Flavor-2
Flavor-3
Flavor-4