

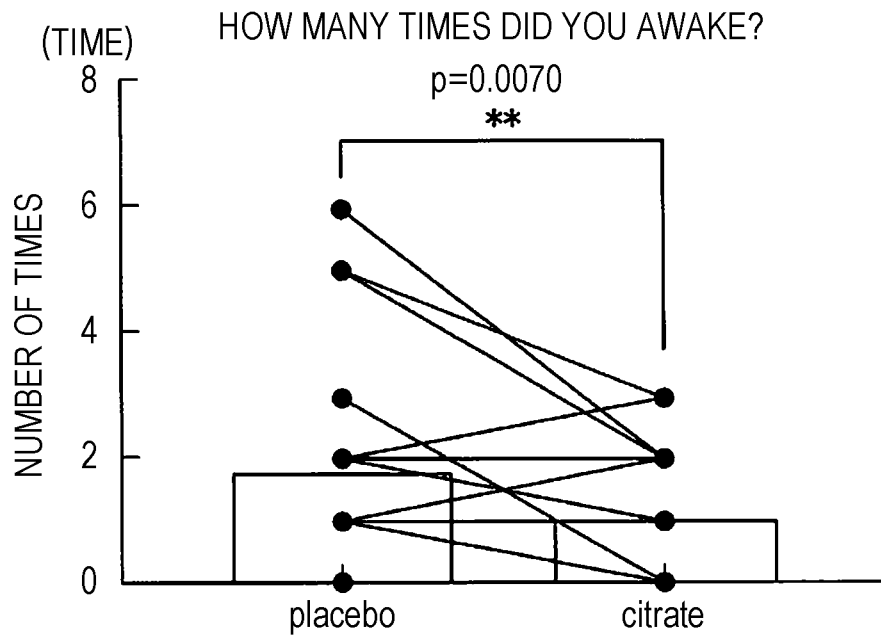
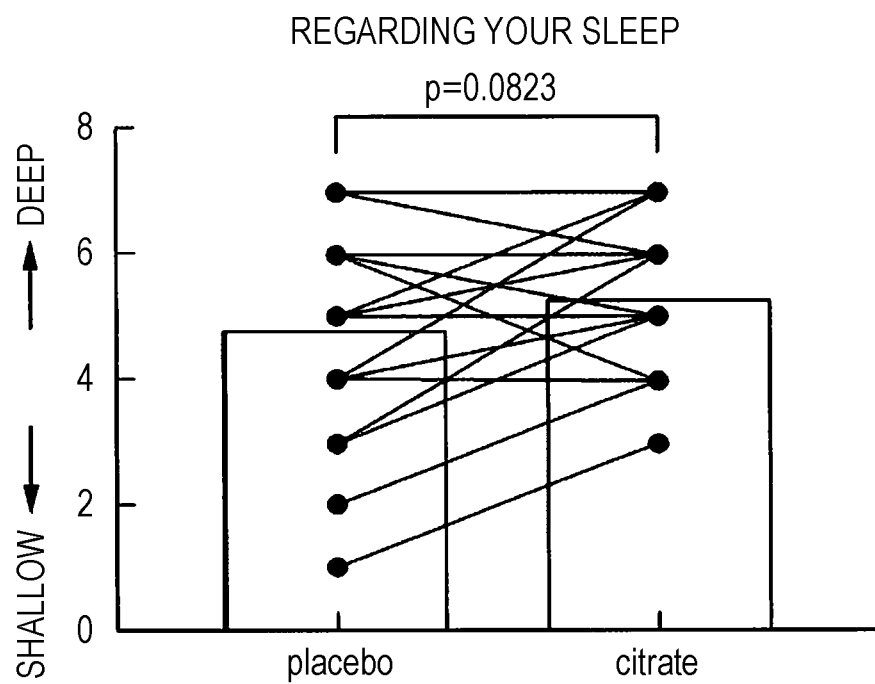
FIG. 1*FIG. 2*

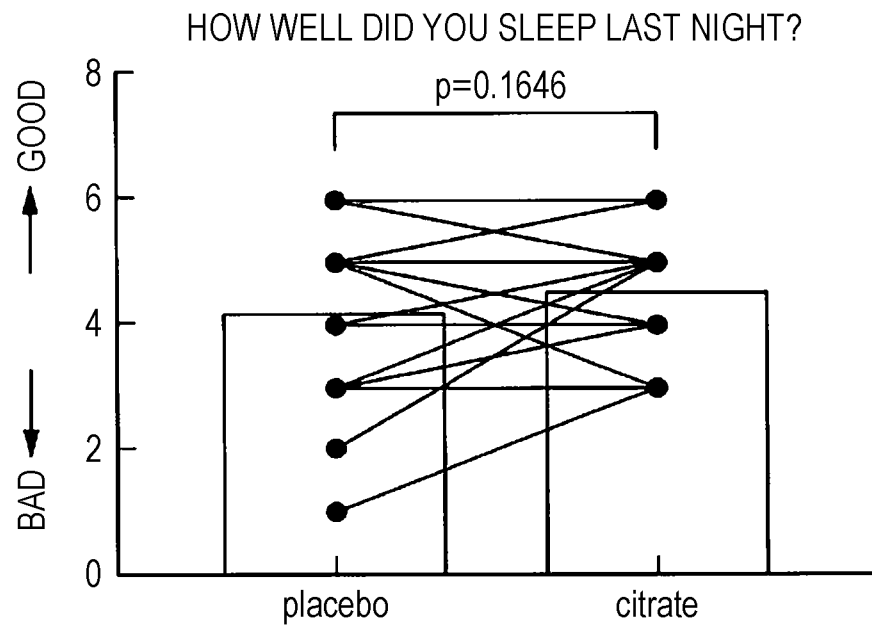
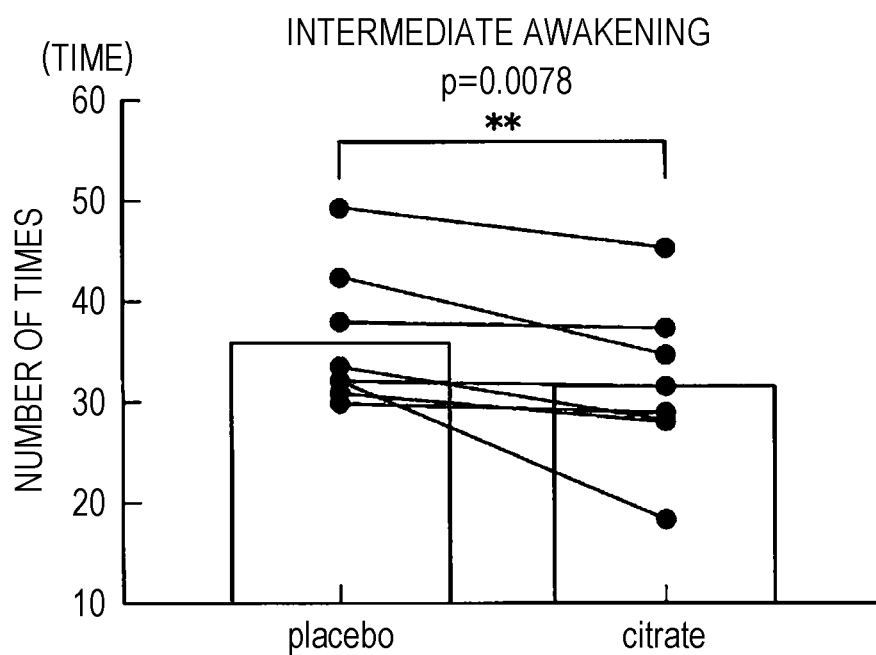
FIG. 3**FIG. 4**

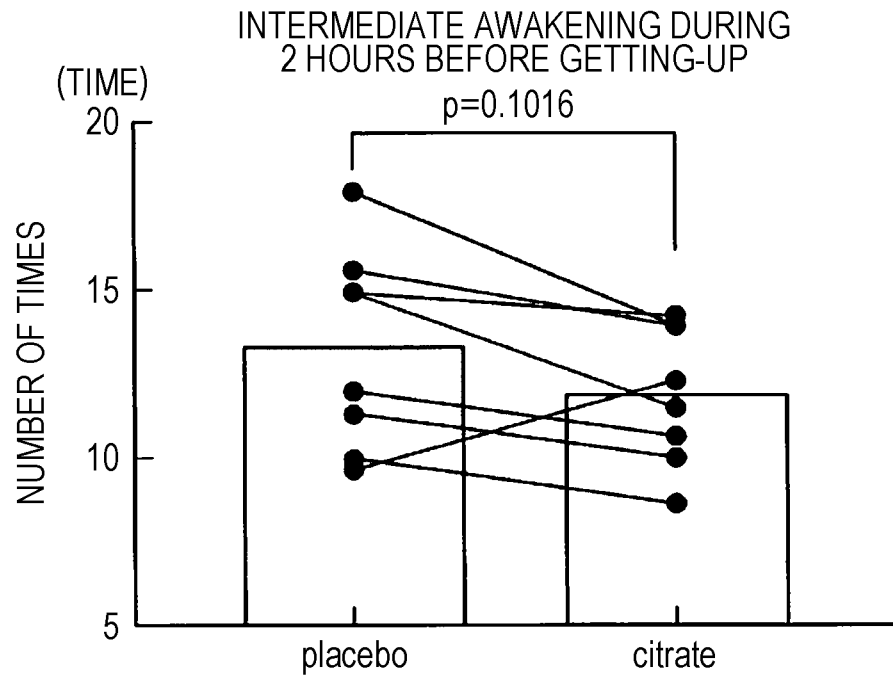
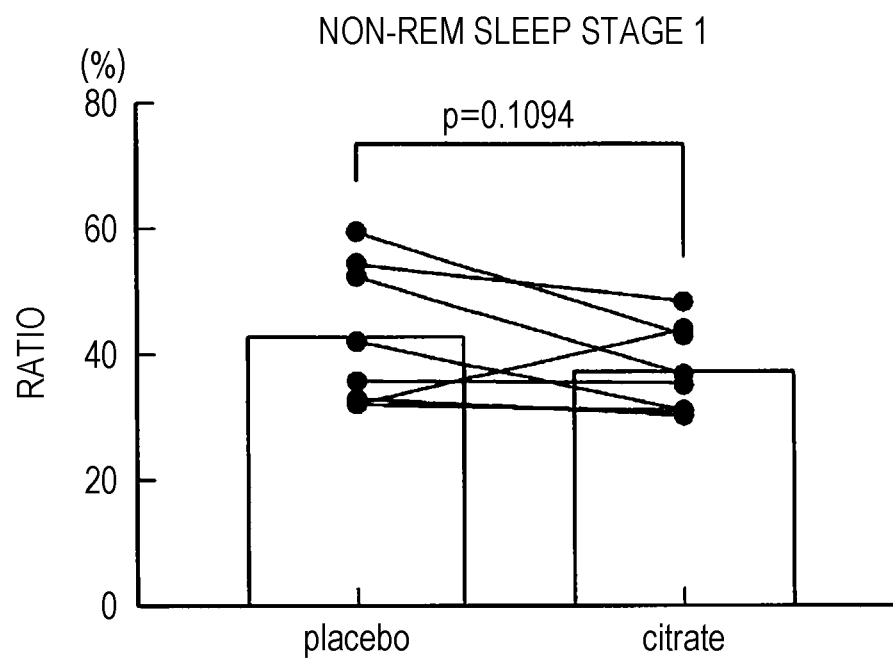
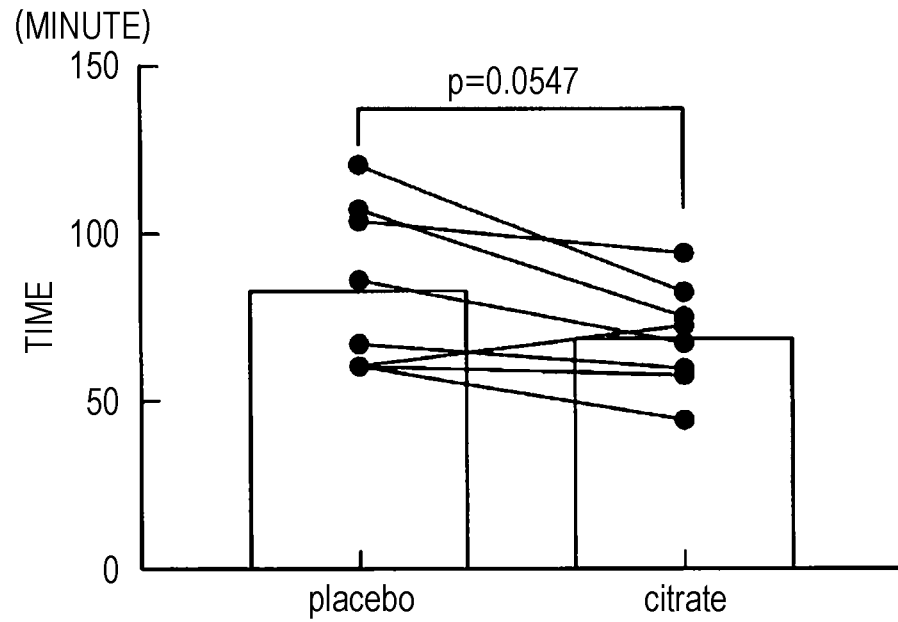
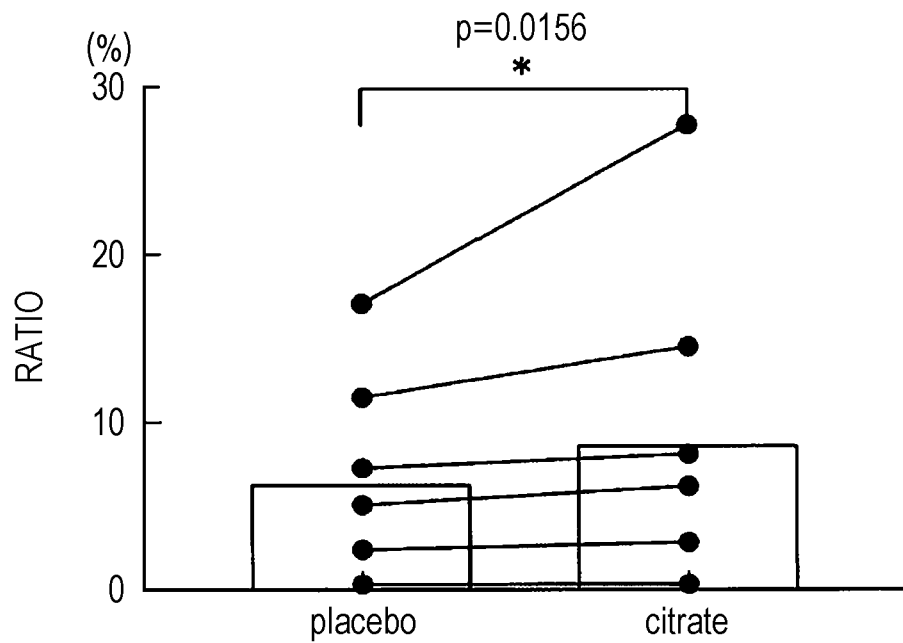
FIG. 5**FIG. 6**

FIG. 7

NON-REM SLEEP STAGE 1

**FIG. 8**

NON-REM SLEEP STAGE 3



5/11

FIG. 9

NON-REM SLEEP STAGE 3

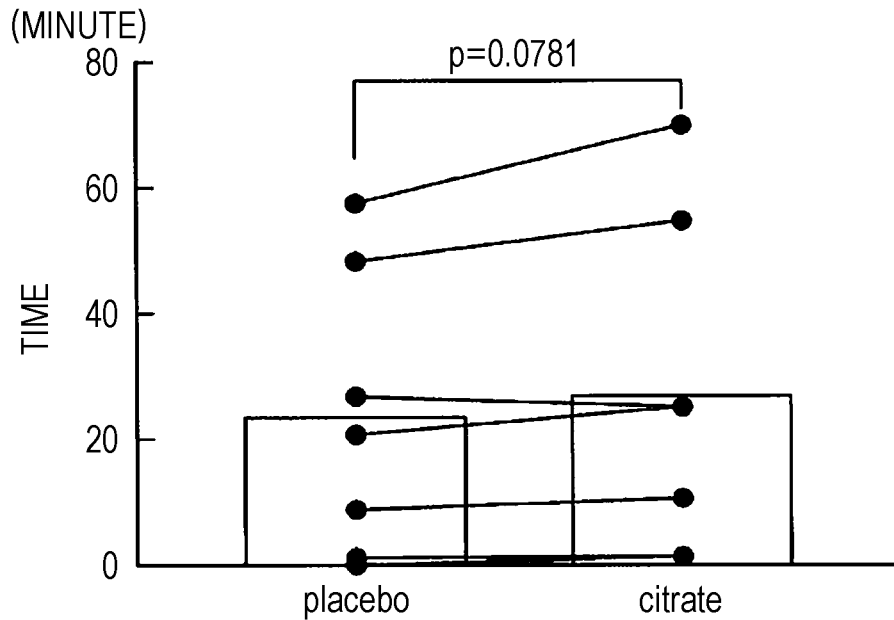
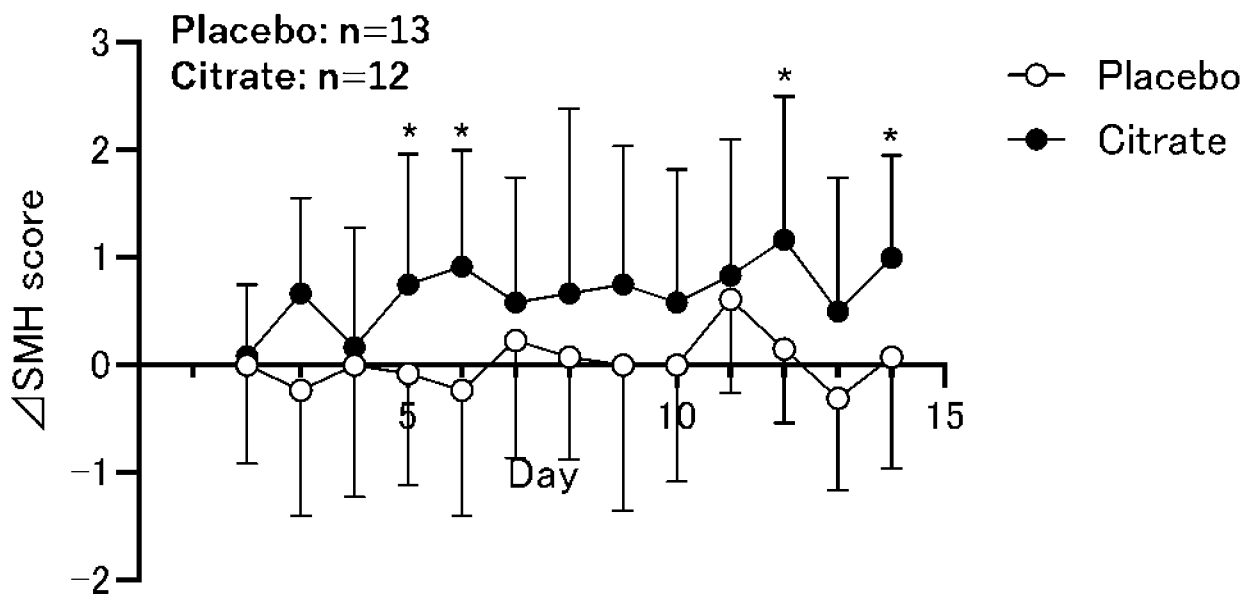


FIG. 10

DIFFERENCE IN SCORE OF
"DEGREE OF REFRESHNESS AT THE TIME OF GETTING-UP"

Δ DEGREE OF REFRESHNESS (vs day 1)



*p<0.05 vs Placebo group (Mann-Whitney)

FIG. 11POMS2 SHORTENED VERSION (MALE AND FEMALE) (Δ REAL NUMBER VALUE)

ITEM	Placebo	Citrate
<u>AH</u>	-1.54 $\pm$ 6.60	-2.67 $\pm$ 5.76
<u>CB</u>	0.69 $\pm$ 6.85	-0.75 $\pm$ 9.85
<u>DD</u>	1.00 $\pm$ 6.32	0.58 $\pm$ 11.47
<u>FI</u>	2.15 $\pm$ 6.81	0.92 $\pm$ 9.23
<u>TA</u>	-0.08 $\pm$ 6.85	-1.58 $\pm$ 8.18
<u>VA</u>	1.85 $\pm$ 5.54	0.83 $\pm$ 8.36
F	1.54 $\pm$ 6.60	-3.50 $\pm$ 7.65^a
<u>TMD</u>	-0.15 $\pm$ 6.18	-0.92 $\pm$ 8.89

MEAN $\pm$ STANDARD DEVIATION

Placebo: n=13, Citrate: n=12

^ap=0.0904 vs Placebo (UNPAIRED t-TEST)THE LOWER THE SCORE IS,
THE BETTERAH (ANGER - HOSTILITY), CB (CONFUSION - BAFFLEMENT),
DD (DEPRESSION - DECLINE), FI (FATIGUE - INERTIA),
TA (TENSION - ANXIETY), TMD (TOTAL MOOD DISTURBANCE)THE HIGHER THE SCORE IS,
THE BETTER

VA (ACTIVENESS - VITALITY), F (FRIENDSHIP)

FIG. 12POMS2 SHORTENED VERSION (ONLY FEMALE) (Δ REAL NUMBER VALUE)

ITEM	Placebo	Citrate
<u>AH</u>	-0.33 $\pm$ 8.38	-6.40 $\pm$ 3.97
<u>CB</u>	2.83 $\pm$ 5.74	-5.00 $\pm$ 7.21^a
<u>DD</u>	3.17 $\pm$ 7.78	-6.00 $\pm$ 9.72
<u>FI</u>	2.33 $\pm$ 7.81	-6.20 $\pm$ 7.56
<u>TA</u>	3.00 $\pm$ 7.27	-6.80 $\pm$ 6.83^b
<u>VA</u>	1.00 $\pm$ 6.45	4.60 $\pm$ 8.02
<u>F</u>	1.33 $\pm$ 5.50	-1.20 $\pm$ 10.06
<u>TMD</u>	2.17 $\pm$ 7.52	-7.40 $\pm$ 6.39^c

MEAN $\pm$ STANDARD DEVIATION

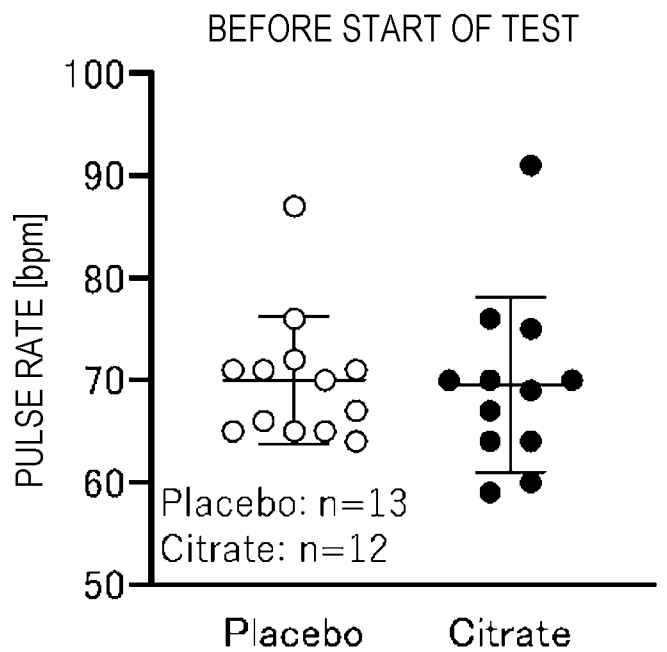
Placebo: n=6, Citrate: n=5

^ap=0.0753, ^bp=0.0480 and ^cp=0.0515 vs Placebo (UNPAIRED t-TEST)THE LOWER THE SCORE IS,
THE BETTERAH (ANGER - HOSTILITY), CB (CONFUSION - BAFFLEMENT),
DD (DEPRESSION - DECLINE), FI (FATIGUE - INERTIA),
TA (TENSION - ANXIETY), TMD (TOTAL MOOD DISTURBANCE)THE HIGHER THE SCORE IS,
THE BETTER

VA (ACTIVENESS - VITALITY), F (FRIENDSHIP)

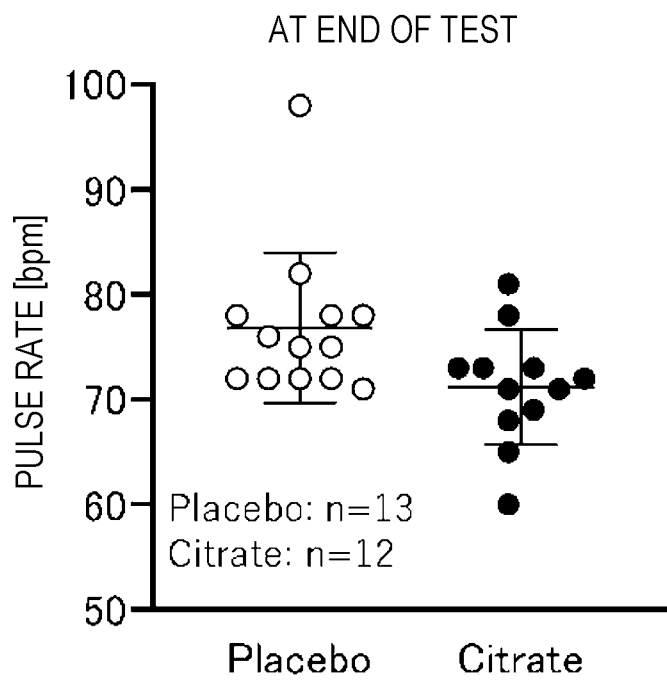
8/11

FIG. 13



Not significant between groups
(Unpaired t-test)

FIG. 14



$p=0.0371$ (Unpaired t-test)

9/11

FIG. 15

△ PULSE RATE

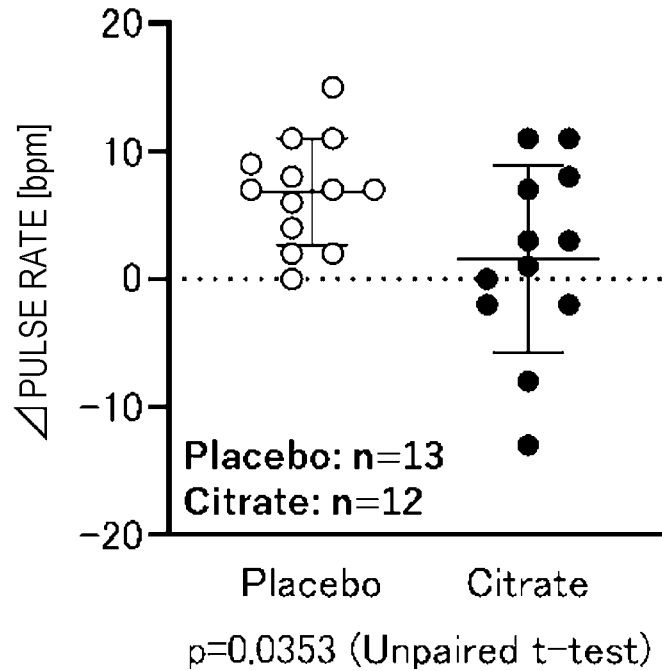


FIG. 16

OSA QUESTIONNAIRE (MALE AND FEMALE) (Δ REAL NUMBER VALUE)

ITEM	Placebo	Citrate
FIRST FACTOR <u>DROWSINESS AT THE TIME OF GETTING-UP</u>	1.50 ± 2.84	3.63 ± 5.75
THIRD FACTOR DREAMING	3.27 ± 6.40	1.33 ± 5.69
FOURTH FACTOR RECOVERY FROM FATIGUE	2.33 ± 3.47	1.36 ± 5.48

MEAN ± STANDARD DEVIATION

Placebo: n=13, Citrate: n=12

10/11

FIG. 17

OSA QUESTIONNAIRE (ONLY FEMALE) (Δ REAL NUMBER VALUE)

ITEM	Placebo	Citrate
FIRST FACTOR <u>DROWSINESS AT</u> <u>THE TIME OF GETTING-UP</u>	1.58 $\pm$ 2.67	5.65 $\pm$ 5.89
THIRD FACTOR <u>DREAMING</u>	1.67 $\pm$ 5.57	3.60 $\pm$ 8.08
FOURTH FACTOR <u>RECOVERY FROM FATIGUE</u>	1.28 $\pm$ 2.75	3.40 $\pm$ 5.07

MEAN $\pm$ STANDARD DEVIATION

Placebo: n=6, Citrate: n=5

FIG. 18

FATIGUE FEELING VAS (MALE AND FEMALE)

TIME	Placebo	Citrate
pre	45.46 $\pm$ 16.65	46.36 $\pm$ 16.95
FIRST WEEK	42.82 $\pm$ 13.38	33.99 $\pm$ 17.56^a
SECOND WEEK	39.52 $\pm$ 12.27	33.01 $\pm$ 16.31^b

MEAN $\pm$ STANDARD DEVIATION, UNIT: mm

Placebo: n=12, Citrate: n=12

^ap=0.0249 and ^bp=0.0365 vs pre (PAIRED t-TEST)

FIG. 19

FATIGUE FEELING VAS (FEMALE)

TIME	Placebo	Citrate
pre	48.63 ± 22.40	50.73 ± 20.31
FIRST WEEK	50.07 ± 7.40	32.40 ± 18.65^b
SECOND WEEK	44.60 ± 10.30	26.67 ± 18.37^{a,c}

MEAN ± STANDARD DEVIATION, UNIT: mm

Placebo: n=5, Citrate: n=5

^ap=0.0632 vs pre (PAIRED t-TEST)

^bp=0.0845 and ^cp=0.0933 vs Placebo (UNPAIRED t-TEST)