

## Appendix 1. Questions and scores of SMH

| Items                                                                | Scores     |                          |                         |                       |                     |                      |             |                     |           |
|----------------------------------------------------------------------|------------|--------------------------|-------------------------|-----------------------|---------------------|----------------------|-------------|---------------------|-----------|
|                                                                      | 0          | 1                        | 2                       | 3                     | 4                   | 5                    | 6           | 7                   | 8         |
| How was your sleep?                                                  | —          | Very light               | Light                   | Fairly light          | Light average       | Deep average         | Fairly deep | Deep                | Very deep |
| How many times did you wake up?                                      | Not at all | Once                     | Twice                   | Three times           | Four times          | Five times           | Six times   | More than six times | —         |
| How well did you sleep last night?                                   | —          | Very badly               | Badly                   | Fairly badly          | Fairly well         | well                 | Very well   | —                   | —         |
| How clear-headed did you feel after getting up this morning?         | —          | Still very drowsy indeed | Still moderately drowsy | Still slightly drowsy | Fairly clear-headed | Alert                | Very alert  | —                   | —         |
| How satisfied were you with last night's sleep?                      | —          | Very unsatisfied         | Moderately unsatisfied  | Slightly unsatisfied  | Fairly satisfied    | Completely satisfied | —           | —                   | —         |
| How much difficulty did you have in getting off to sleep last night? | —          | None or very little      | Some                    | A lot                 | Extreme difficulty  | —                    | —           | —                   | —         |

SMH, St. Mary's Hospital sleep questionnaire

## Appendix 2.1. Comparison of PSQI-J answers among the FAS population

| Items                                                                                                 | Time point | Placebo group (n = 22) |     |     |     |     | SAC group (n = 19) |     |     |     |     | Group comparison  |               |          |
|-------------------------------------------------------------------------------------------------------|------------|------------------------|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-------------------|---------------|----------|
|                                                                                                       |            | Min                    | Q1  | Med | Q3  | Max | Min                | Q1  | Med | Q3  | Max | Rank sum          | Rank sum      | <i>P</i> |
|                                                                                                       |            |                        |     |     |     |     |                    |     |     |     |     | for Placebo group | for SAC group |          |
| During the past month, how long (in minutes) has it usually taken you to fall asleep each night? (C2) | Screening  | 0.0                    | 0.3 | 1.0 | 2.0 | 3.0 | 0.0                | 0.0 | 1.0 | 1.5 | 3.0 | 496.5             | 364.5         | 0.361    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 2.0 | 3.0 | 0.0                | 0.0 | 0.0 | 1.0 | 2.0 | 518.0             | 343.0         | 0.110    |
| During the past month, how many hours of actual sleep did you get at night? (C3, C4)                  | Screening  | 0.0                    | 0.0 | 1.0 | 2.0 | 3.0 | 0.0                | 0.5 | 1.0 | 2.0 | 3.0 | 453.5             | 407.5         | 0.829    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 1.0 | 3.0 | 0.0                | 0.0 | 1.0 | 1.5 | 2.0 | 463.0             | 398.0         | 0.994    |
| During the past month, how often have you had trouble sleeping because you...                         |            |                        |     |     |     |     |                    |     |     |     |     |                   |               |          |
| Cannot get to sleep within 30 minutes (C2)                                                            | Screening  | 0.0                    | 1.3 | 2.0 | 3.0 | 3.0 | 0.0                | 0.5 | 2.0 | 2.0 | 3.0 | 523.0             | 338.0         | 0.100    |
|                                                                                                       | 12w        | 0.0                    | 1.0 | 1.5 | 2.0 | 3.0 | 0.0                | 0.0 | 1.0 | 1.0 | 2.0 | 556.5             | 304.5         | 0.009*   |
| Wake up in the middle of the night or early morning (C5)                                              | Screening  | 0.0                    | 1.0 | 1.0 | 2.8 | 3.0 | 0.0                | 2.0 | 3.0 | 3.0 | 3.0 | 380.0             | 481.0         | 0.023*   |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.5 | 2.8 | 3.0 | 0.0                | 0.5 | 1.0 | 2.0 | 3.0 | 465.5             | 395.5         | 0.991    |
| Have to get up to use the bathroom (C5)                                                               | Screening  | 0.0                    | 0.0 | 1.0 | 1.0 | 3.0 | 0.0                | 0.0 | 2.0 | 2.5 | 3.0 | 403.5             | 457.5         | 0.111    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 1.0 | 3.0 | 0.0                | 0.0 | 1.0 | 2.0 | 3.0 | 452.5             | 408.5         | 0.826    |
| Cannot breathe comfortably (C5)                                                                       | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 1.0 | 0.0                | 0.0 | 0.0 | 0.0 | 2.0 | 447.0             | 414.0         | 0.529    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 2.0 | 0.0                | 0.0 | 0.0 | 0.0 | 1.0 | 450.5             | 410.5         | 0.588    |
| Cough or snore loudly (C5)                                                                            | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 3.0 | 0.0                | 0.0 | 0.0 | 1.0 | 2.0 | 442.5             | 418.5         | 0.571    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 3.0 | 0.0                | 0.0 | 0.0 | 0.0 | 2.0 | 478.5             | 382.5         | 0.557    |
| Feel too cold (C5)                                                                                    | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 2.0 | 0.0                | 0.0 | 0.0 | 0.0 | 2.0 | 477.0             | 384.0         | 0.627    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 1.0 | 0.0                | 0.0 | 0.0 | 0.0 | 2.0 | 460.5             | 400.5         | 1.000    |
| Feel too hot (C5)                                                                                     | Screening  | 0.0                    | 0.0 | 0.5 | 1.8 | 3.0 | 0.0                | 0.0 | 1.0 | 2.0 | 2.0 | 454.5             | 406.5         | 0.839    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 2.0 | 0.0                | 0.0 | 0.0 | 0.0 | 1.0 | 469.5             | 391.5         | 0.859    |
| Have bad dreams (C5)                                                                                  | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 1.0 | 0.0                | 0.0 | 0.0 | 1.0 | 2.0 | 427.5             | 433.5         | 0.288    |

|                                                                                                                                       |           |     |     |     |     |     |     |     |     |     |     |       |       |        |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|--------|
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.8 | 2.0 | 0.0 | 0.0 | 0.0 | 0.5 | 2.0 | 466.0 | 395.0 | 0.900  |
| Have pain (C5)                                                                                                                        | Screening | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 462.0 | 399.0 | 1.000  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 438.0 | 423.0 | 0.268  |
| During the past month, how would you rate your sleep quality overall? (C1)                                                            | Screening | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 0.0 | 1.5 | 2.0 | 2.0 | 3.0 | 438.0 | 423.0 | 0.484  |
|                                                                                                                                       | 12w       | 0.0 | 1.0 | 1.0 | 2.0 | 3.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 547.0 | 314.0 | 0.007* |
| During the past month, how often have you taken medicine to help you sleep? (C6)                                                      | Screening | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 481.0 | 380.0 | 0.490  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 462.0 | 399.0 | 1.000  |
| During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity? (C7) | Screening | 0.0 | 0.0 | 0.5 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 3.0 | 455.0 | 406.0 | 0.822  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.8 | 2.0 | 0.0 | 0.0 | 0.0 | 0.5 | 2.0 | 466.0 | 395.0 | 0.900  |
| During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done? (C7)                | Screening | 0.0 | 0.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.0 | 1.0 | 1.0 | 2.0 | 468.0 | 393.0 | 0.921  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 504.0 | 357.0 | 0.183  |

PSQI-J, Pittsburgh Sleep Quality Index (Japanese version); FAS, full analysis set; Min, minimum; Med, median; Max, maximum; Q1, first quartile; Q3, third quartile; 12w, 12 weeks after consumption

\* $P < 0.05$

## Appendix 2.2. Comparison of PSQI-J answers among the FAS population with similar sleep quality

| Items                                                                                                 | Time point | Placebo group (n = 22) |     |     |     |     | SAC group (n = 19) |     |     |     |     | Group comparison  |               |          |
|-------------------------------------------------------------------------------------------------------|------------|------------------------|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-------------------|---------------|----------|
|                                                                                                       |            | Min                    | Q1  | Med | Q3  | Max | Min                | Q1  | Med | Q3  | Max | Rank sum          | Rank sum      | <i>P</i> |
|                                                                                                       |            |                        |     |     |     |     |                    |     |     |     |     | for Placebo group | for SAC group |          |
| During the past month, how long (in minutes) has it usually taken you to fall asleep each night? (C2) | Screening  | 0.0                    | 0.5 | 1.0 | 2.0 | 3.0 | 0.0                | 0.0 | 0.5 | 1.8 | 3.0 | 348.0             | 213.0         | 0.374    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 2.0 | 3.0 | 0.0                | 0.0 | 0.0 | 1.0 | 2.0 | 362.5             | 198.5         | 0.125    |
| During the past month, how many hours of actual sleep did you get at night? (C3, C4)                  | Screening  | 0.0                    | 0.0 | 1.0 | 1.5 | 3.0 | 0.0                | 1.0 | 1.0 | 2.0 | 3.0 | 297.5             | 263.5         | 0.328    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 1.0 | 3.0 | 0.0                | 0.0 | 1.0 | 1.8 | 2.0 | 310.0             | 251.0         | 0.638    |
| During the past month, how often have you had trouble sleeping because you...                         |            |                        |     |     |     |     |                    |     |     |     |     |                   |               |          |
| Cannot get to sleep within 30 minutes (C2)                                                            | Screening  | 0.0                    | 1.5 | 2.0 | 3.0 | 3.0 | 0.0                | 0.3 | 1.5 | 2.8 | 3.0 | 364.5             | 196.5         | 0.118    |
|                                                                                                       | 12w        | 0.0                    | 1.0 | 1.0 | 2.0 | 3.0 | 0.0                | 0.0 | 0.5 | 1.0 | 2.0 | 382.0             | 179.0         | 0.025*   |
| Wake up in the middle of the night or early morning (C5)                                              | Screening  | 0.0                    | 1.0 | 1.0 | 2.0 | 3.0 | 0.0                | 2.0 | 2.5 | 3.0 | 3.0 | 259.5             | 301.5         | 0.017*   |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 2.0 | 3.0 | 0.0                | 0.3 | 1.0 | 2.0 | 2.0 | 337.0             | 224.0         | 0.617    |
| Have to get up to use the bathroom (C5)                                                               | Screening  | 0.0                    | 0.0 | 1.0 | 1.0 | 3.0 | 0.0                | 0.0 | 1.5 | 2.0 | 3.0 | 286.5             | 274.5         | 0.167    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 1.0 | 1.0 | 3.0 | 0.0                | 0.0 | 0.5 | 1.0 | 2.0 | 330.5             | 230.5         | 0.774    |
| Cannot breathe comfortably (C5)                                                                       | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 1.0 | 0.0                | 0.0 | 0.0 | 0.0 | 0.0 | 337.0             | 224.0         | 0.496    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 0.0 | 0.0                | 0.0 | 0.0 | 0.0 | 1.0 | 313.5             | 247.5         | 0.424    |
| Cough or snore loudly (C5)                                                                            | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 3.0 | 0.0                | 0.0 | 0.0 | 0.8 | 2.0 | 313.5             | 247.5         | 0.744    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 3.0 | 0.0                | 0.0 | 0.0 | 0.0 | 1.0 | 335.5             | 225.5         | 0.454    |
| Feel too cold (C5)                                                                                    | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 2.0 | 0.0                | 0.0 | 0.0 | 0.0 | 2.0 | 331.0             | 230.0         | 0.724    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 1.0 | 0.0                | 0.0 | 0.0 | 0.0 | 2.0 | 320.5             | 240.5         | 0.811    |
| Feel too hot (C5)                                                                                     | Screening  | 0.0                    | 0.0 | 0.0 | 1.5 | 3.0 | 0.0                | 0.0 | 0.5 | 1.8 | 2.0 | 323.0             | 238.0         | 1.000    |
|                                                                                                       | 12w        | 0.0                    | 0.0 | 0.0 | 0.0 | 2.0 | 0.0                | 0.0 | 0.0 | 0.0 | 0.0 | 344.0             | 217.0         | 0.244    |
| Have bad dreams (C5)                                                                                  | Screening  | 0.0                    | 0.0 | 0.0 | 0.0 | 1.0 | 0.0                | 0.0 | 0.0 | 0.0 | 1.0 | 322.5             | 238.5         | 1.000    |

|                                                                                                                                       |           |     |     |     |     |     |     |     |     |     |     |       |       |        |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|--------|
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.5 | 2.0 | 0.0 | 0.0 | 0.0 | 0.8 | 2.0 | 321.5 | 239.5 | 1.000  |
| Have pain (C5)                                                                                                                        | Screening | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 323.0 | 238.0 | 1.000  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 311.0 | 250.0 | 0.561  |
| During the past month, how would you rate your sleep quality overall? (C1)                                                            | Screening | 1.0 | 1.0 | 2.0 | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 | 2.0 | 3.0 | 296.5 | 264.5 | 0.308  |
|                                                                                                                                       | 12w       | 0.0 | 1.0 | 1.0 | 2.0 | 2.0 | 0.0 | 0.3 | 1.0 | 1.0 | 1.0 | 377.0 | 184.0 | 0.039* |
| During the past month, how often have you taken medicine to help you sleep? (C6)                                                      | Screening | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 330.0 | 231.0 | 1.000  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 323.0 | 238.0 | 1.000  |
| During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity? (C7) | Screening | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 1.0 | 3.0 | 318.0 | 243.0 | 0.818  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.8 | 2.0 | 328.0 | 233.0 | 0.912  |
| During the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done? (C7)                | Screening | 0.0 | 0.0 | 1.0 | 1.0 | 2.0 | 0.0 | 0.0 | 1.0 | 1.0 | 2.0 | 333.0 | 228.0 | 0.694  |
|                                                                                                                                       | 12w       | 0.0 | 0.0 | 0.0 | 1.0 | 2.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 372.0 | 189.0 | 0.024* |

PSQI-J, Pittsburgh Sleep Quality Index (Japanese version); FAS, full analysis set; Min, minimum; Med, median; Max, maximum; Q1, first quartile; Q3, third quartile; 12w, 12 weeks after consumption

\* $P < 0.05$

### Appendix 3.1. Comparison of SMH answers among the FAS population

| Items                                                                | Time point | Placebo group (n = 22) |     |     |     |     | SAC group (n = 19) |     |     |     |     | Group comparison           |                        |          |
|----------------------------------------------------------------------|------------|------------------------|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|----------------------------|------------------------|----------|
|                                                                      |            | Min                    | Q1  | Med | Q3  | Max | Min                | Q1  | Med | Q3  | Max | Rank sum for Placebo group | Rank sum for SAC group | <i>P</i> |
|                                                                      |            |                        |     |     |     |     |                    |     |     |     |     |                            |                        |          |
| How was your sleep?                                                  | Screening  | 2.0                    | 3.0 | 4.0 | 5.0 | 6.0 | 1.0                | 2.0 | 4.0 | 5.0 | 6.0 | 478.5                      | 382.5                  | 0.674    |
|                                                                      | 12w        | 2.0                    | 4.0 | 4.0 | 6.0 | 7.0 | 2.0                | 4.0 | 5.0 | 6.0 | 7.0 | 439.0                      | 422.0                  | 0.546    |
| How many times did you wake up?                                      | Screening  | 1.0                    | 1.0 | 2.0 | 3.0 | 6.0 | 1.0                | 2.0 | 3.0 | 3.0 | 3.0 | 418.0                      | 443.0                  | 0.224    |
|                                                                      | 12w        | 1.0                    | 1.0 | 1.0 | 2.0 | 4.0 | 1.0                | 1.0 | 1.0 | 2.0 | 3.0 | 462.5                      | 398.5                  | 1.000    |
| How well did you sleep last night?                                   | Screening  | 1.0                    | 3.0 | 3.0 | 4.0 | 6.0 | 2.0                | 3.0 | 3.0 | 4.0 | 5.0 | 465.5                      | 395.5                  | 0.926    |
|                                                                      | 12w        | 3.0                    | 3.0 | 4.0 | 5.0 | 6.0 | 2.0                | 3.5 | 5.0 | 5.0 | 6.0 | 438.0                      | 423.0                  | 0.519    |
| How clear-headed did you feel after getting up this morning?         | Screening  | 1.0                    | 3.0 | 3.0 | 3.8 | 4.0 | 1.0                | 2.0 | 3.0 | 4.0 | 5.0 | 463.5                      | 397.5                  | 0.987    |
|                                                                      | 12w        | 2.0                    | 3.0 | 4.0 | 4.0 | 5.0 | 2.0                | 3.0 | 4.0 | 5.0 | 6.0 | 430.0                      | 431.0                  | 0.387    |
| How satisfied were you with last night's sleep?                      | Screening  | 1.0                    | 2.0 | 3.0 | 3.0 | 5.0 | 1.0                | 2.5 | 3.0 | 3.5 | 4.0 | 442.0                      | 419.0                  | 0.580    |
|                                                                      | 12w        | 1.0                    | 3.0 | 3.5 | 4.0 | 4.0 | 1.0                | 3.0 | 4.0 | 4.0 | 5.0 | 430.5                      | 430.5                  | 0.392    |
| How much difficulty did you have in getting off to sleep last night? | Screening  | 1.0                    | 1.0 | 2.0 | 2.0 | 4.0 | 1.0                | 1.0 | 1.0 | 2.0 | 3.0 | 492.0                      | 369.0                  | 0.389    |
|                                                                      | 12w        | 1.0                    | 1.0 | 1.0 | 2.0 | 2.0 | 1.0                | 1.0 | 1.0 | 1.0 | 4.0 | 519.0                      | 342.0                  | 0.079    |

SMH, St. Mary's Hospital sleep questionnaire; Min, minimum; Med, median; Max, maximum; Q1, first quartile; Q3, third quartile; 12w, 12 weeks after consumption

### Appendix 3.2. Comparison of SMH answers among the FAS population with similar sleep quality

| Items                                                                | Time point | Placebo group (n = 19) |     |     |     |     | SAC group (n = 14) |     |     |     |     | Group comparison           |                        |          |
|----------------------------------------------------------------------|------------|------------------------|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|----------------------------|------------------------|----------|
|                                                                      |            | Min                    | Q1  | Med | Q3  | Max | Min                | Q1  | Med | Q3  | Max | Rank sum for Placebo group | Rank sum for SAC group | <i>P</i> |
|                                                                      |            |                        |     |     |     |     |                    |     |     |     |     |                            |                        |          |
| How was your sleep?                                                  | Screening  | 2.0                    | 3.0 | 4.0 | 5.0 | 6.0 | 1.0                | 2.0 | 3.5 | 4.8 | 6.0 | 345.5                      | 215.5                  | 0.414    |
|                                                                      | 12w        | 3.0                    | 4.0 | 5.0 | 6.0 | 7.0 | 2.0                | 5.0 | 5.5 | 6.0 | 7.0 | 297.0                      | 264.0                  | 0.341    |
| How many times did you wake up?                                      | Screening  | 1.0                    | 1.0 | 2.0 | 2.5 | 6.0 | 1.0                | 2.0 | 3.0 | 3.0 | 3.0 | 280.0                      | 281.0                  | 0.100    |
|                                                                      | 12w        | 1.0                    | 1.0 | 1.0 | 2.0 | 3.0 | 1.0                | 1.0 | 1.0 | 2.0 | 3.0 | 331.0                      | 230.0                  | 0.779    |
| How well did you sleep last night?                                   | Screening  | 1.0                    | 3.0 | 3.0 | 4.0 | 6.0 | 2.0                | 2.3 | 3.0 | 4.0 | 5.0 | 332.0                      | 229.0                  | 0.737    |
|                                                                      | 12w        | 3.0                    | 3.0 | 4.0 | 5.0 | 6.0 | 3.0                | 4.0 | 5.0 | 5.0 | 6.0 | 280.5                      | 280.5                  | 0.117    |
| How clear-headed did you feel after getting up this morning?         | Screening  | 1.0                    | 3.0 | 3.0 | 3.5 | 4.0 | 1.0                | 2.0 | 3.0 | 4.0 | 5.0 | 332.5                      | 228.5                  | 0.741    |
|                                                                      | 12w        | 2.0                    | 3.0 | 4.0 | 4.0 | 5.0 | 2.0                | 3.0 | 4.0 | 5.0 | 6.0 | 290.0                      | 271.0                  | 0.221    |
| How satisfied were you with last night's sleep?                      | Screening  | 1.0                    | 2.0 | 3.0 | 3.0 | 5.0 | 1.0                | 2.3 | 3.0 | 3.8 | 4.0 | 314.0                      | 247.0                  | 0.719    |
|                                                                      | 12w        | 1.0                    | 3.0 | 3.0 | 4.0 | 4.0 | 1.0                | 3.3 | 4.0 | 4.0 | 5.0 | 282.0                      | 279.0                  | 0.106    |
| How much difficulty did you have in getting off to sleep last night? | Screening  | 1.0                    | 1.0 | 2.0 | 2.0 | 4.0 | 1.0                | 1.0 | 1.5 | 2.0 | 3.0 | 336.5                      | 224.5                  | 0.610    |
|                                                                      | 12w        | 1.0                    | 1.0 | 1.0 | 2.0 | 2.0 | 1.0                | 1.0 | 1.0 | 1.0 | 1.0 | 386.0                      | 175.0                  | 0.004*   |

SMH, St. Mary's Hospital sleep questionnaire; Min, minimum; Med, median; Max, maximum; Q1, first quartile; Q3, third quartile; 12w, 12 weeks after consumption

\* $P < 0.05$