

**Table 2: Mutagenic potential of untreated and tap water (TW) treated *in vitro* digested fresh-cut lettuce (doses: 0.16% - 100%) in the Ames test.**

| 100%              | TA98             |                | TA100             |                | TA1535             |                  | TA1537            |                | TA102            |                 |
|-------------------|------------------|----------------|-------------------|----------------|--------------------|------------------|-------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9            | -S9               | +S9            | -S9                | +S9              | -S9               | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 36 ± 3 (1.0)   | 179 ± 16 (1.0)    | 123 ± 5 (1.0)  | 37 ± 12 (1.0)      | 23 ± 4 (1.0)     | 69 ± 6 (1.0)      | 62 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 1781 ± 461 (5.0) | 326 ± 24 (9.0) | 2026 ± 259 (11.3) | 313 ± 17 (2.5) | 2091 ± 1130 (56.5) | 424 ± 28 (18.4)  | 1268 ± 280 (18.3) | 154 ± 88 (2.4) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 69 ± 4 (0.1)     | 62 ± 8 (1.7)   | 266 ± 35 (1.4)    | 213 ± 14 (1.7) | 44 ± 22 (1.1)      | 37 ± 10 (1.6)    | 18 ± 3 (0.2)      | 20 ± 7 (0.3)   | 446 ± 93 (1.1)   | 585 ± 48 (1.6)  |
| unwashed          | 131 ± 13 (0.3)   | 168 ± 12 (4.6) | 238 ± 12 (1.3)    | 365 ± 27 (2.9) | 614 ± 37 (16.6)    | 497 ± 139 (21.9) | 144 ± 15 (2.0)    | 157 ± 9 (2.5)  | 493 ± 41 (1.3)   | 583 ± 41 (1.6)  |
| TW-washed         | 68 ± 3 (0.1)     | 63 ± 6 (2.8)   | 227 ± 20 (1.2)    | 200 ± 7 (2.0)  | 558 ± 79 (15.0)    | 534 ± 12 (23.3)  | 153 ± 14 (2.2)    | 145 ± 9 (2.6)  | 493 ± 37 (1.3)   | 429 ± 61 (1.5)  |

| 20%               | TA98             |                | TA100             |                | TA1535             |                 | TA1537            |                | TA102            |                 |
|-------------------|------------------|----------------|-------------------|----------------|--------------------|-----------------|-------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9            | -S9               | +S9            | -S9                | +S9             | -S9               | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 36 ± 3 (1.0)   | 179 ± 16 (1.0)    | 123 ± 5 (1.0)  | 37 ± 12 (1.0)      | 23 ± 4 (1.0)    | 69 ± 6 (1.0)      | 62 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 1781 ± 461 (5.0) | 326 ± 24 (9.0) | 2026 ± 259 (11.3) | 313 ± 17 (2.5) | 2091 ± 1130 (56.5) | 424 ± 28 (18.4) | 1268 ± 280 (18.3) | 154 ± 88 (2.4) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 69 ± 4 (0.1)     | 62 ± 8 (1.7)   | 266 ± 35 (1.4)    | 213 ± 14 (1.7) | 44 ± 22 (1.1)      | 37 ± 10 (1.6)   | 18 ± 3 (0.2)      | 20 ± 7 (0.3)   | 446 ± 93 (1.1)   | 585 ± 48 (1.6)  |
| unwashed          | 37 ± 6 (0.1)     | 56 ± 7 (1.5)   | 186 ± 37 (1.0)    | 266 ± 11 (2.1) | 640 ± 50 (17.2)    | 330 ± 4 (14.3)  | 98 ± 14 (1.4)     | 101 ± 18 (1.6) | 358 ± 23 (0.9)   | 350 ± 45 (0.9)  |
| TW-washed         | 38 ± 8 (0.1)     | 35 ± 7 (0.9)   | 155 ± 8 (0.8)     | 150 ± 10 (1.2) | 435 ± 38 (11.7)    | 346 ± 24 (15.0) | 88 ± 12 (1.2)     | 72 ± 10 (1.1)  | 322 ± 22 (0.8)   | 314 ± 31 (0.8)  |

| 4%                | TA98             |                | TA100             |                | TA1535             |                  | TA1537            |                | TA102            |                 |
|-------------------|------------------|----------------|-------------------|----------------|--------------------|------------------|-------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9            | -S9               | +S9            | -S9                | +S9              | -S9               | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 36 ± 3 (1.0)   | 179 ± 16 (1.0)    | 123 ± 5 (1.0)  | 37 ± 12 (1.0)      | 23 ± 4 (1.0)     | 69 ± 6 (1.0)      | 62 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 1781 ± 461 (5.0) | 326 ± 24 (9.0) | 2026 ± 259 (11.3) | 313 ± 17 (2.5) | 2091 ± 1130 (56.5) | 424 ± 28 (18.4)  | 1268 ± 280 (18.3) | 154 ± 88 (2.4) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 69 ± 4 (0.1)     | 62 ± 8 (1.7)   | 266 ± 35 (1.4)    | 213 ± 14 (1.7) | 44 ± 22 (1.1)      | 37 ± 10 (1.6)    | 18 ± 3 (0.2)      | 20 ± 7 (0.3)   | 446 ± 93 (1.1)   | 585 ± 48 (1.6)  |
| unwashed          | 27 ± 4 (0.1)     | 32 ± 1 (0.8)   | 180 ± 8 (1.0)     | 252 ± 17 (2.0) | 435 ± 93 (11.7)    | 300 ± 8 (13.0)   | 82 ± 7 (1.1)      | 78 ± 10 (1.2)  | 319 ± 18 (0.8)   | 310 ± 19 (0.8)  |
| TW-washed         | 30 ± 0 (0.1)     | 31 ± 3 (0.8)   | 172 ± 9 (0.9)     | 174 ± 9 (1.4)  | 315 ± 58 (8.5)     | 561 ± 152 (24.3) | 64 ± 11 (0.9)     | 89 ± 14 (1.4)  | 304 ± 41 (0.8)   | 349 ± 21 (0.9)  |

| 0.8%              | TA98             |                | TA100             |                | TA1535             |                 | TA1537            |                | TA102            |                 |
|-------------------|------------------|----------------|-------------------|----------------|--------------------|-----------------|-------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9            | -S9               | +S9            | -S9                | +S9             | -S9               | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 36 ± 3 (1.0)   | 179 ± 16 (1.0)    | 123 ± 5 (1.0)  | 37 ± 12 (1.0)      | 23 ± 4 (1.0)    | 69 ± 6 (1.0)      | 62 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 1781 ± 461 (5.0) | 326 ± 24 (9.0) | 2026 ± 259 (11.3) | 313 ± 17 (2.5) | 2091 ± 1130 (56.5) | 424 ± 28 (18.4) | 1268 ± 280 (18.3) | 154 ± 88 (2.4) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 69 ± 4 (0.1)     | 62 ± 8 (1.7)   | 266 ± 35 (1.4)    | 213 ± 14 (1.7) | 44 ± 22 (1.1)      | 37 ± 10 (1.6)   | 18 ± 3 (0.2)      | 20 ± 7 (0.3)   | 446 ± 93 (1.1)   | 585 ± 48 (1.6)  |
| unwashed          | 28 ± 4 (0.1)     | 26 ± 2 (0.7)   | 167 ± 31 (0.9)    | 238 ± 20 (1.9) | 383 ± 49 (10.3)    | 265 ± 31 (11.5) | 83 ± 12 (1.2)     | 81 ± 12 (1.3)  | 304 ± 11 (0.8)   | 309 ± 28 (0.8)  |
| TW-washed         | 31 ± 6 (0.1)     | 30 ± 5 (0.8)   | 140 ± 6 (0.7)     | 198 ± 2 (1.6)  | 255 ± 44 (6.8)     | 281 ± 33 (12.2) | 75 ± 9 (1.0)      | 84 ± 5 (1.3)   | 307 ± 11 (0.8)   | 352 ± 28 (0.9)  |

| 0.16%             | TA98             |                | TA100             |                | TA1535             |                 | TA1537            |                | TA102            |                 |
|-------------------|------------------|----------------|-------------------|----------------|--------------------|-----------------|-------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9            | -S9               | +S9            | -S9                | +S9             | -S9               | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 36 ± 3 (1.0)   | 179 ± 16 (1.0)    | 123 ± 5 (1.0)  | 37 ± 12 (1.0)      | 23 ± 4 (1.0)    | 69 ± 6 (1.0)      | 62 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 1781 ± 461 (5.0) | 326 ± 24 (9.0) | 2026 ± 259 (11.3) | 313 ± 17 (2.5) | 2091 ± 1130 (56.5) | 424 ± 28 (18.4) | 1268 ± 280 (18.3) | 154 ± 88 (2.4) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 69 ± 4 (0.1)     | 62 ± 8 (1.7)   | 266 ± 35 (1.4)    | 213 ± 14 (1.7) | 44 ± 22 (1.1)      | 37 ± 10 (1.6)   | 18 ± 3 (0.2)      | 20 ± 7 (0.3)   | 446 ± 93 (1.1)   | 585 ± 48 (1.6)  |
| unwashed          | 26 ± 3 (0.1)     | 33 ± 8 (0.9)   | 150 ± 35 (0.8)    | 236 ± 8 (1.9)  | 498 ± 29 (13.4)    | 297 ± 5 (12.9)  | 77 ± 10 (1.1)     | 79 ± 5 (1.2)   | 317 ± 28 (0.8)   | 339 ± 16 (0.9)  |
| TW-washed         | 24 ± 4 (0.1)     | 28 ± 2 (0.7)   | 148 ± 7 (0.8)     | 184 ± 8 (1.4)  | 307 ± 74 (8.2)     | 338 ± 14 (14.6) | 73 ± 6 (1.0)      | 81 ± 5 (1.3)   | 317 ± 27 (0.8)   | 361 ± 14 (1.0)  |

**Table 3: Mutagenic potential of untreated and PTW (20% PTW + 80% TW) treated *in vitro* digested fresh-cut lettuce (doses: 0.16% - 100%) in the Ames test.**

| 100%              | TA98             |                 | TA100             |                  | TA1535           |                   | TA1537             |                 | TA102            |                 |
|-------------------|------------------|-----------------|-------------------|------------------|------------------|-------------------|--------------------|-----------------|------------------|-----------------|
|                   | -S9              | +S9             | -S9               | +S9              | -S9              | +S9               | -S9                | +S9             | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 154 ± 11 (1.0)    | 178 ± 16 (1.0)   | 530 ± 226 (1.0)  | 20 ± 2 (1.0)      | 18 ± 4 (1.0)       | 17 ± 1 (1.0)    | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 2051 ± 288 (13.3) | 1488 ± 329 (8.3) | 1621 ± 156 (3.0) | 451 ± 265 (22.5)  | 1848 ± 304 (102.6) | 128 ± 16 (7.5)  | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 403 ± 22 (1.1)   | 391 ± 74 (0.9)  | 171 ± 11 (1.1)    | 213 ± 14 (1.1)   | 404 ± 20 (0.7)   | 23 ± 4 (1.1)      | 18 ± 3 (1.0)       | 20 ± 7 (1.1)    | 507 ± 36 (1.3)   | 483 ± 59 (1.3)  |
| unwashed          | 380 ± 35 (1.0)   | 398 ± 75 (0.9)  | 390 ± 36 (2.5)    | 340 ± 62 (1.9)   | 1133 ± 295 (2.1) | 1337 ± 142 (66.8) | 50 ± 9 (2.7)       | 122 ± 102 (7.1) | 439 ± 41 (1.1)   | 482 ± 95 (1.3)  |
| PTW-washed        | 191 ± 5 (0.5)    | 120 ± 587 (0.2) | 325 ± 41 (2.1)    | 400 ± 92 (2.2)   | 351 ± 10 (0.6)   | 142 ± 12 (7.1)    | 70 ± 12 (3.8)      | 85 ± 19 (5.0)   | 541 ± 110 (1.4)  | 499 ± 121 (1.3) |

| 20%               | TA98             |                 | TA100             |                  | TA1535           |                  | TA1537             |                | TA102            |                 |
|-------------------|------------------|-----------------|-------------------|------------------|------------------|------------------|--------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9             | -S9               | +S9              | -S9              | +S9              | -S9                | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 154 ± 11 (1.0)    | 178 ± 16 (1.0)   | 530 ± 226 (1.0)  | 20 ± 2 (1.0)     | 18 ± 4 (1.0)       | 17 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 2051 ± 288 (13.3) | 1488 ± 329 (8.3) | 1621 ± 156 (3.0) | 451 ± 265 (22.5) | 1848 ± 304 (102.6) | 128 ± 16 (7.5) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 403 ± 22 (1.1)   | 391 ± 74 (0.9)  | 171 ± 11 (1.1)    | 213 ± 14 (1.1)   | 404 ± 20 (0.7)   | 23 ± 4 (1.1)     | 18 ± 3 (1.0)       | 20 ± 7 (1.1)   | 507 ± 36 (1.3)   | 483 ± 59 (1.3)  |
| unwashed          | 405 ± 67 (1.1)   | 292 ± 24 (0.6)  | 241 ± 41 (1.5)    | 188 ± 22 (1.0)   | 112 ± 120 (0.2)  | 39 ± 23 (1.9)    | 28 ± 6 (1.5)       | 44 ± 19 (2.5)  | 367 ± 29 (0.9)   | 378 ± 31 (1.0)  |
| PTW-washed        | 182 ± 3 (0.5)    | 189 ± 12 (0.4)  | 241 ± 22 (1.5)    | 225 ± 30 (1.2)   | 604 ± 19 (1.1)   | 36 ± 28 (1.8)    | 33 ± 4 (1.8)       | 19 ± 4 (1.1)   | 373 ± 30 (1.0)   | 383 ± 54 (1.0)  |

| 4%                | TA98             |                 | TA100             |                  | TA1535           |                  | TA1537             |                | TA102            |                 |
|-------------------|------------------|-----------------|-------------------|------------------|------------------|------------------|--------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9             | -S9               | +S9              | -S9              | +S9              | -S9                | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 154 ± 11 (1.0)    | 178 ± 16 (1.0)   | 530 ± 226 (1.0)  | 20 ± 2 (1.0)     | 18 ± 4 (1.0)       | 17 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 2051 ± 288 (13.3) | 1488 ± 329 (8.3) | 1621 ± 156 (3.0) | 451 ± 265 (22.5) | 1848 ± 304 (102.6) | 128 ± 16 (7.5) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 403 ± 22 (1.1)   | 391 ± 74 (0.9)  | 171 ± 11 (1.1)    | 213 ± 14 (1.1)   | 404 ± 20 (0.7)   | 23 ± 4 (1.1)     | 18 ± 3 (1.0)       | 20 ± 7 (1.1)   | 507 ± 36 (1.3)   | 483 ± 59 (1.3)  |
| unwashed          | 389 ± 57 (1.0)   | 378 ± 116 (0.9) | 172 ± 17 (1.1)    | 160 ± 26 (0.8)   | 466 ± 630 (0.8)  | 16 ± 1 (0.8)     | 19 ± 2 (1.0)       | 18 ± 1 (1.0)   | 344 ± 19 (0.9)   | 350 ± 7 (0.9)   |
| PTW-washed        | 182 ± 11 (0.5)   | 174 ± 5 (0.4)   | 160 ± 33 (1.0)    | 184 ± 62 (1.0)   | 199 ± 47 (0.3)   | 19 ± 3 (0.9)     | 18 ± 1 (1.0)       | 25 ± 1 (1.4)   | 365 ± 8 (0.9)    | 336 ± 19 (0.9)  |

| 0.8%              | TA98             |                 | TA100             |                  | TA1535           |                  | TA1537             |                | TA102            |                 |
|-------------------|------------------|-----------------|-------------------|------------------|------------------|------------------|--------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9             | -S9               | +S9              | -S9              | +S9              | -S9                | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 154 ± 11 (1.0)    | 178 ± 16 (1.0)   | 530 ± 226 (1.0)  | 20 ± 2 (1.0)     | 18 ± 4 (1.0)       | 17 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 2051 ± 288 (13.3) | 1488 ± 329 (8.3) | 1621 ± 156 (3.0) | 451 ± 265 (22.5) | 1848 ± 304 (102.6) | 128 ± 16 (7.5) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 403 ± 22 (1.1)   | 391 ± 74 (0.9)  | 171 ± 11 (1.1)    | 213 ± 14 (1.1)   | 404 ± 20 (0.7)   | 23 ± 4 (1.1)     | 18 ± 3 (1.0)       | 20 ± 7 (1.1)   | 507 ± 36 (1.3)   | 483 ± 59 (1.3)  |
| unwashed          | 402 ± 64 (1.1)   | 408 ± 8 (0.9)   | 150 ± 10 (0.9)    | 149 ± 44 (0.8)   | 26 ± 12 (0.1)    | 22 ± 18 (1.1)    | 14 ± 1 (0.7)       | 17 ± 2 (1.0)   | 356 ± 31 (0.9)   | 344 ± 24 (0.9)  |
| PTW-washed        | 186 ± 8 (0.5)    | 161 ± 30 (0.3)  | 116 ± 3 (0.7)     | 202 ± 19 (1.1)   | 57 ± 55 (0.1)    | 19 ± 15 (0.9)    | 15 ± 1 (0.8)       | 26 ± 9 (1.5)   | 343 ± 7 (0.9)    | 341 ± 9 (0.9)   |

| 0.16%             | TA98             |                 | TA100             |                  | TA1535           |                  | TA1537             |                | TA102            |                 |
|-------------------|------------------|-----------------|-------------------|------------------|------------------|------------------|--------------------|----------------|------------------|-----------------|
|                   | -S9              | +S9             | -S9               | +S9              | -S9              | +S9              | -S9                | +S9            | -S9              | +S9             |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 154 ± 11 (1.0)    | 178 ± 16 (1.0)   | 530 ± 226 (1.0)  | 20 ± 2 (1.0)     | 18 ± 4 (1.0)       | 17 ± 1 (1.0)   | 373 ± 13 (1.0)   | 359 ± 20 (1.0)  |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 2051 ± 288 (13.3) | 1488 ± 329 (8.3) | 1621 ± 156 (3.0) | 451 ± 265 (22.5) | 1848 ± 304 (102.6) | 128 ± 16 (7.5) | 1002 ± 134 (2.6) | 750 ± 108 (2.0) |
| Digestion control | 403 ± 22 (1.1)   | 391 ± 74 (0.9)  | 171 ± 11 (1.1)    | 213 ± 14 (1.1)   | 404 ± 20 (0.7)   | 23 ± 4 (1.1)     | 18 ± 3 (1.0)       | 20 ± 7 (1.1)   | 507 ± 36 (1.3)   | 483 ± 59 (1.3)  |
| unwashed          | 362 ± 32 (1.0)   | 308 ± 27 (0.7)  | 143 ± 24 (0.9)    | 147 ± 22 (0.8)   | 18 ± 6 (0.1)     | 17 ± 1 (0.8)     | 15 ± 2 (0.8)       | 16 ± 3 (0.9)   | 382 ± 48 (1.0)   | 415 ± 37 (1.1)  |
| PTW-washed        | 171 ± 24 (0.4)   | 408 ± 350 (0.9) | 130 ± 12 (0.8)    | 163 ± 52 (0.9)   | 22 ± 5 (0.1)     | 20 ± 4 (1.0)     | 16 ± 4 (0.8)       | 18 ± 4 (1.0)   | 341 ± 13 (0.9)   | 415 ± 102 (1.1) |

**Table 4: Mutagenic potential of untreated and PTW (50% PTW + 50% TW) treated *in vitro* digested fresh-cut lettuce (doses: 0.16% - 100%) in the Ames test.**

| 100%              | TA98             |                 | TA100            |                  | TA1535           |               | TA1537             |               | TA102            |                  |
|-------------------|------------------|-----------------|------------------|------------------|------------------|---------------|--------------------|---------------|------------------|------------------|
|                   | -S9              | +S9             | -S9              | +S9              | -S9              | +S9           | -S9                | +S9           | -S9              | +S9              |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 361 ± 57 (1.0)   | 448 ± 15 (1.0)   | 24 ± 6 (1.0)     | 21 ± 3 (1.0)  | 11 ± 1 (1.0)       | 22 ± 22 (1.0) | 683 ± 8 (1.0)    | 481 ± 15 (1.0)   |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 3256 ± 140 (9.0) | 1221 ± 49 (2.7)  | 1605 ± 96 (66.8) | 143 ± 4 (6.8) | 1535 ± 142 (139.5) | 88 ± 21 (4.0) | 1914 ± 89 (2.8)  | 1581 ± 110 (3.2) |
| Digestion control | 741 ± 102 (2.0)  | 391 ± 74 (0.9)  | 411 ± 96 (1.1)   | 368 ± 34 (0.8)   | 22 ± 1 (0.9)     | 23 ± 4 (1.0)  | 18 ± 3 (1.6)       | 20 ± 7 (0.9)  | 928 ± 44 (1.3)   | 808 ± 24 (1.6)   |
| unwashed          | 240 ± 21 (0.6)   | 322 ± 127 (0.7) | 1143 ± 74 (3.1)  | 1207 ± 267 (2.6) | 67 ± 4 (2.7)     | 71 ± 6 (3.3)  | 85 ± 9 (7.7)       | 95 ± 20 (4.7) | 1585 ± 382 (2.3) | 1273 ± 148 (2.6) |
| PTW-washed        | 374 ± 71 (1.0)   | 226 ± 29 (0.5)  | 390 ± 98 (1.0)   | 1868 ± 496 (4.1) | 60 ± 11 (2.5)    | 77 ± 19 (3.6) | 35 ± 4 (3.1)       | 42 ± 8 (1.9)  | 1637 ± 202 (2.3) | 1502 ± 233 (3.1) |

| 20%               | TA98             |                 | TA100            |                 | TA1535           |               | TA1537             |               | TA102           |                  |
|-------------------|------------------|-----------------|------------------|-----------------|------------------|---------------|--------------------|---------------|-----------------|------------------|
|                   | -S9              | +S9             | -S9              | +S9             | -S9              | +S9           | -S9                | +S9           | -S9             | +S9              |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 361 ± 57 (1.0)   | 448 ± 15 (1.0)  | 24 ± 6 (1.0)     | 21 ± 3 (1.0)  | 11 ± 1 (1.0)       | 22 ± 22 (1.0) | 683 ± 8 (1.0)   | 481 ± 15 (1.0)   |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 3256 ± 140 (9.0) | 1221 ± 49 (2.7) | 1605 ± 96 (66.8) | 143 ± 4 (6.8) | 1535 ± 142 (139.5) | 88 ± 21 (4.0) | 1914 ± 89 (2.8) | 1581 ± 110 (3.2) |
| Digestion control | 741 ± 102 (2.0)  | 391 ± 74 (0.9)  | 411 ± 96 (1.1)   | 368 ± 34 (0.8)  | 22 ± 1 (0.9)     | 23 ± 4 (1.0)  | 18 ± 3 (1.6)       | 20 ± 7 (0.9)  | 928 ± 44 (1.3)  | 808 ± 24 (1.6)   |
| unwashed          | 125 ± 27 (0.3)   | 140 ± 19 (0.3)  | 1166 ± 114 (3.2) | 1197 ± 32 (2.6) | 28 ± 3 (1.1)     | 41 ± 6 (1.9)  | 39 ± 4 (3.5)       | 33 ± 6 (1.5)  | 955 ± 64 (1.3)  | 891 ± 113 (1.8)  |
| PTW-washed        | 43 ± 5 (0.1)     | 82 ± 16 (0.1)   | 406 ± 125 (1.1)  | 961 ± 183 (2.1) | 25 ± 8 (1.0)     | 41 ± 7 (1.9)  | 18 ± 2 (1.6)       | 17 ± 2 (0.7)  | 892 ± 229 (1.3) | 1224 ± 183 (2.5) |

| 4%                | TA98             |                 | TA100            |                 | TA1535           |               | TA1537             |               | TA102           |                  |
|-------------------|------------------|-----------------|------------------|-----------------|------------------|---------------|--------------------|---------------|-----------------|------------------|
|                   | -S9              | +S9             | -S9              | +S9             | -S9              | +S9           | -S9                | +S9           | -S9             | +S9              |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 361 ± 57 (1.0)   | 448 ± 15 (1.0)  | 24 ± 6 (1.0)     | 21 ± 3 (1.0)  | 11 ± 1 (1.0)       | 22 ± 22 (1.0) | 683 ± 8 (1.0)   | 481 ± 15 (1.0)   |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 3256 ± 140 (9.0) | 1221 ± 49 (2.7) | 1605 ± 96 (66.8) | 143 ± 4 (6.8) | 1535 ± 142 (139.5) | 88 ± 21 (4.0) | 1914 ± 89 (2.8) | 1581 ± 110 (3.2) |
| Digestion control | 741 ± 102 (2.0)  | 391 ± 74 (0.9)  | 411 ± 96 (1.1)   | 368 ± 34 (0.8)  | 22 ± 1 (0.9)     | 23 ± 4 (1.0)  | 18 ± 3 (1.6)       | 20 ± 7 (0.9)  | 928 ± 44 (1.3)  | 808 ± 24 (1.6)   |
| unwashed          | 69 ± 8 (0.1)     | 81 ± 21 (0.1)   | 495 ± 38 (1.3)   | 580 ± 48 (1.2)  | 21 ± 5 (0.8)     | 26 ± 4 (1.2)  | 18 ± 4 (1.6)       | 18 ± 2 (0.8)  | 653 ± 52 (0.9)  | 695 ± 147 (1.4)  |
| PTW-washed        | 17 ± 5 (0.1)     | 101 ± 11 (0.2)  | 358 ± 58 (0.9)   | 734 ± 93 (1.6)  | 24 ± 1 (1.0)     | 28 ± 3 (1.3)  | 17 ± 3 (1.5)       | 16 ± 0 (0.7)  | 744 ± 55 (1.0)  | 973 ± 176 (2.0)  |

| 0.8%              | TA98             |                 | TA100            |                 | TA1535           |               | TA1537             |               | TA102           |                  |
|-------------------|------------------|-----------------|------------------|-----------------|------------------|---------------|--------------------|---------------|-----------------|------------------|
|                   | -S9              | +S9             | -S9              | +S9             | -S9              | +S9           | -S9                | +S9           | -S9             | +S9              |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 361 ± 57 (1.0)   | 448 ± 15 (1.0)  | 24 ± 6 (1.0)     | 21 ± 3 (1.0)  | 11 ± 1 (1.0)       | 22 ± 22 (1.0) | 683 ± 8 (1.0)   | 481 ± 15 (1.0)   |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 3256 ± 140 (9.0) | 1221 ± 49 (2.7) | 1605 ± 96 (66.8) | 143 ± 4 (6.8) | 1535 ± 142 (139.5) | 88 ± 21 (4.0) | 1914 ± 89 (2.8) | 1581 ± 110 (3.2) |
| Digestion control | 741 ± 102 (2.0)  | 391 ± 74 (0.9)  | 411 ± 96 (1.1)   | 368 ± 34 (0.8)  | 22 ± 1 (0.9)     | 23 ± 4 (1.0)  | 18 ± 3 (1.6)       | 20 ± 7 (0.9)  | 928 ± 44 (1.3)  | 808 ± 24 (1.6)   |
| unwashed          | 38 ± 14 (0.1)    | 76 ± 39 (0.1)   | 496 ± 39 (1.3)   | 502 ± 14 (1.1)  | 17 ± 1 (0.7)     | 22 ± 3 (1.0)  | 12 ± 6 (1.1)       | 11 ± 1 (0.5)  | 644 ± 207 (0.9) | 657 ± 59 (1.3)   |
| PTW-washed        | 23 ± 16 (0.1)    | 70 ± 9 (0.1)    | 316 ± 63 (0.8)   | 892 ± 71 (1.9)  | 21 ± 6 (0.8)     | 20 ± 4 (0.9)  | 13 ± 1 (1.1)       | 17 ± 2 (0.7)  | 754 ± 216 (1.1) | 750 ± 50 (1.5)   |



| 0.16%             | TA98             |                 | TA100            |                 | TA1535           |               | TA1537             |               | TA102           |                  |
|-------------------|------------------|-----------------|------------------|-----------------|------------------|---------------|--------------------|---------------|-----------------|------------------|
|                   | -S9              | +S9             | -S9              | +S9             | -S9              | +S9           | -S9                | +S9           | -S9             | +S9              |
| Negative control  | 355 ± 43 (1.0)   | 418 ± 12 (1.0)  | 361 ± 57 (1.0)   | 448 ± 15 (1.0)  | 24 ± 6 (1.0)     | 21 ± 3 (1.0)  | 11 ± 1 (1.0)       | 22 ± 22 (1.0) | 683 ± 8 (1.0)   | 481 ± 15 (1.0)   |
| Positive control  | 2979 ± 400 (8.3) | 1152 ± 63 (2.7) | 3256 ± 140 (9.0) | 1221 ± 49 (2.7) | 1605 ± 96 (66.8) | 143 ± 4 (6.8) | 1535 ± 142 (139.5) | 88 ± 21 (4.0) | 1914 ± 89 (2.8) | 1581 ± 110 (3.2) |
| Digestion control | 741 ± 102 (2.0)  | 391 ± 74 (0.9)  | 411 ± 96 (1.1)   | 368 ± 34 (0.8)  | 22 ± 1 (0.9)     | 23 ± 4 (1.0)  | 18 ± 3 (1.6)       | 20 ± 7 (0.9)  | 928 ± 44 (1.3)  | 808 ± 24 (1.6)   |
| unwashed          | 45 ± 8 (0.1)     | 78 ± 4 (0.1)    | 503 ± 94 (1.3)   | 528 ± 58 (1.1)  | 18 ± 2 (0.7)     | 20 ± 2 (0.9)  | 11 ± 3 (1.0)       | 15 ± 2 (0.6)  | 576 ± 55 (0.8)  | 581 ± 117 (1.2)  |
| PTW-washed        | 32 ± 27 (0.1)    | 80 ± 9 (0.1)    | 297 ± 41 (0.8)   | 491 ± 36 (1.0)  | 18 ± 1 (0.7)     | 21 ± 2 (1.0)  | 12 ± 2 (1.1)       | 12 ± 2 (0.5)  | 695 ± 87 (1.0)  | 800 ± 58 (1.6)   |