**Mutagenicity of water samples in strain TA100 of *Salmonella*a**

Data are expressed as revertants (rev/) per plate in the presence of absence of S9, which is the supernatant of a 9,000 x *g* centrifugation of homogenized rat liver plus cofactors to provide some mammalian metabolism to the bacteria. The slope (rev/L-eq) was generated from the linear portion of the dose-response curve determined by the rev/plate versus dose (L-equivalent/plate). These data and details of the sample preparation and data analyses are in the published paper, which is Open Access and freely available to anyone with an Internet connection.

|  |  | **Rev/plate** | **Mean slope ± SE** |
| --- | --- | --- | --- |
|  | **Dose** |  **-S9** |  **+S9** |  **(Rev/L-eq)** |
| **Sample and Collection Date** | **(L-eq/plate)** | **Exp 1** | **Exp 2**  | **Exp 3** |  |
| 1-Raw 9-15-11b | 0 | 112 | 151 | 128 |  |
|  | 0.001 | 113 | 146 | 109 |  |
|  | 0.005 | 115 | 135 | 130 |  |
|  | 0.01 | 123 | 126 | 140 |  |
|  | 0.05 | 110 | 123 | 138 |  |
|  | 0.1 | 103 | 131 | 156 |  |
|  | 0.2 | 130 | 146 | 166 |  |
|  | 0.3 | 119 | 127 | 148 |  |
|  | 0.5 | 120 | 156 | 161 |  |
|  | 1.0 | 111 | 125 | 147 |  |
|  |  |  |  | 0 (-S9), 0 (+S9) |
|  |  |  |  |  |
| 1-Cl Finished 9-15-11 | 0 | 112 | 151 |  |
|  | 0.001 | 116 |  |  |
|  | 0.005 | 104 |  |  |
|  | 0.01 | 112 |  |  |
|  | 0.05 | 107 |  |  |
|  | 0.1 | 120 | 178 |  |
|  | 0.2 | 145 | 201 |  |
|  | 0.3 | 149 | 271 |  |
|  | 0.5 | 299 | 336 |  |
|  | 1.0 | 345 | 577 |  |
|  |  |  |  | 356.0 ± 43.0 |
|  |  |  |  |  |
| 1-Cl Tap 9-16-11 | 0 | 112 | 151 |  |
|  | 0.001 | 93 |  |  |
|  | 0.005 | 98 |  |  |
|  | 0.01 | 104 |  |  |
|  | 0.05 | 120 |  |  |
|  | 0.1 | 154 | 196 |  |
|  | 0.2 | 160 | 230 |  |
|  | 0.3 | 199 | 334 |  |
|  | 0.5 | 315 | 433 |  |
|  | 1.0 | 614 | 703 |  |
|  |  |  |  | 547.5 ± 34.5 |
|  |  |  |  |  |
| 1-Cl Average Use Pool 9-16-11 | 0 | 112 | 151 |  |
|  | 0.001 | 95 |  |  |
|  | 0.005 | 112 |  |  |
|  | 0.01 | 123 |  |  |
|  | 0.05 | 150 |  |  |
|  | 0.1 | 130 | 187 |  |
|  | 0.2 | 165 | 242 |  |
|  | 0.3 | 197 | 280 |  |
|  | 0.5 | 294 | 392 |  |
|  | 1.0 | 496 | 596 |  |
|  |  |  |  | 430.5 ± 29.5 |
|  |  |  |  |  |
| 1-Cl Clean Pool 1-3-12 | 0 | 105 | 103 |  |
|  | 0.001 | 102 |  |  |
|  | 0.005 | 105 |  |  |
|  | 0.01 | 85 | 100 |  |
|  | 0.05 | 144 | 136 |  |
|  | 0.1 | 189 | 186 |  |
|  | 0.2 | 230 | 310 |  |
|  | 0.3 | 390 | 422 |  |
|  |  |  |  | 993.9 ± 55.4 |
|  |  |  |  |  |
| 1-Cl Heavily Used Pool 11-2-11 | 0 | 112 | 151 |  |
|  | 0.001 | 117 |  |  |
|  | 0.005 | 140 |  |  |
|  | 0.01 | 123 |  |  |
|  | 0.05 | 316 |  |  |
|  | 0.1 | 170 | 277 |  |
|  | 0.2 | 231 | 410 |  |
|  | 0.3 | 452 | 634 |  |
|  | 0.5 | 637 | 821 |  |
|  |  |  |  | 1208.3 ± 129.9 |
|  |  |  |  |  |
| 1-Cl Clean Spa 9-17-11 | 0 | 112 | 151 |  |
|  | 0.001 | 86 |  |  |
|  | 0.005 | 100 |  |  |
|  | 0.01 | 104 |  |  |
|  | 0.05 | 128 |  |  |
|  | 0.1 | 158 | 217 |  |
|  | 0.2 | 273 | 309 |  |
|  | 0.3 | 314 | 510 |  |
|  | 0.5 | 470 | 720 |  |
|  |  |  |  | 993.2 ± 107.0 |
|  |  |  |  |  |
| 1-Cl Heavily Used Spa 11-2-11 | 0 | 112 | 151 |  |
|  | 0.001 | 118 |  |  |
|  | 0.005 | 123 |  |  |
|  | 0.01 | 94 |  |  |
|  | 0.05 | 209 | 279 |  |
|  | 0.1 | 355 | 461 |  |
|  | 0.2 | 589 | 863 |  |
|  |  |  |  | 3071.7 ± 308.6 |
|  |  |  |  |  |
| 2-Raw 11-15-11b | 0 | 108 | 151 | 128 |  |
|  | 0.001 | 122 | 132 | 140 |  |
|  | 0.005 | 104 | 129 | 143 |  |
|  | 0.01 | 107 | 110 | 157 |  |
|  | 0.05 | 99 | 132 | 136 |  |
|  | 0.1 | 110 | 117 | 124 |  |
|  | 0.2 | 107 | 137 | 137 |  |
|  | 0.3 | 114 | 143 | 157 |  |
|  | 0.5 | 132 | 156 | 147 |  |
|  | 1.0 | 158 | 212 | 161 |  |
|  |  |  |  | 0 (-S9), 0 (+S9) |
|  |  |  |  |  |
| 2-Cl Finished 11-15-11 | 0 | 112 | 151 |  |
|  | 0.001 | 96 |  |  |
|  | 0.005 | 110 |  |  |
|  | 0.01 | 107 |  |  |
|  | 0.05 | 150 | 214 |  |
|  | 0.1 | 179 | 234 |  |
|  | 0.2 | 261 | 310 |  |
|  | 0.3 | 382 | 474 |  |
|  | 0.5 | 589 | 714 |  |
|  | 1.0 | 872 | 1137 |  |
|  |  |  |  | 915.2 ± 52.5 |
|  |  |  |  |  |
| 2-Cl Tap 11-16-11 | 0 | 112 | 151 |  |
|  | 0.001 | 120 |  |  |
|  | 0.005 | 110 |  |  |
|  | 0.01 | 121 | 137 |  |
|  | 0.05 |  | 191 |  |
|  | 0.1 |  | 244 |  |
|  | 0.2 | 328 | 362 |  |
|  | 0.3 | 381 | 489 |  |
|  | 0.5 | 623 | 743 |  |
|  | 1.0 | 951 |  |  |
|  |  |  |  | 907.2 ± 55.6 |
|  |  |  |  |  |
| 2-Br Average Use Pool 11-16-11 | 0 | 108 | 151 |  |
|  | 0.001 | 114 |  |  |
|  | 0.005 | 96 |  |  |
|  | 0.01 | 119 | 157 |  |
|  | 0.05 | 224 | 246 |  |
|  | 0.1 | 328 | 314 |  |
|  | 0.2 | 538 | 503 |  |
|  |  |  |  | 2021.5 ± 85.0 |
|  |  |  |  |  |
| 2-Br Average Use Spa 11-16-11 | 0 | 108 | 151 |  |
|  | 0.001 | 105 |  |  |
|  | 0.005 | 114 |  |  |
|  | 0.01 | 145 | 153 |  |
|  | 0.05 | 289 | 289 |  |
|  | 0.1 | 471 | 359 |  |
|  |  |  |  | 3038.5 ± 276.4 |
|  |  |  |  |  |
| 2-Br Clean Pool 1-5-12 | 0 | 105 | 103 |  |
|  | 0.001 | 122 | 124 |  |
|  | 0.005 | 128 | 117 |  |
|  | 0.01 | 122 | 95 |  |
|  | 0.05 | 140 | 151 |  |
|  | 0.1 | 172 | 189 |  |
|  | 0.2 | 400 | 335 |  |
|  | 0.3 | 544 | 451 |  |
|  | 0.5 | 735 | 608 |  |
|  |  |  |  | 1179.9 ± 57.9 |
|  |  |  |  |  |
| 2-Br Clean Spa 1-6-12 | 0 | 105 | 103 |  |
|  | 0.001 | 121 | 124 |  |
|  | 0.005 | 124 | 150 |  |
|  | 0.01 | 155 | 201 |  |
|  | 0.05 | 158 | 206 |  |
|  | 0.1 | 266 | 254 |  |
|  | 0.2 | 526 | 499 |  |
|  | 0.3 | 790 | 662 |  |
|  |  |  |  | 1984.4 ± 98.5 |
|  |  |  |  |  |
| 2-Br Heavily Used Spa 1-5-12 | 0 | 105 | 103 |  |
|  | 0.001 | 116 | 107 |  |
|  | 0.005 | 139 | 131 |  |
|  | 0.01 | 146 | 101 |  |
|  | 0.05 | 243 | 171 |  |
|  | 0.1 |  | 277 |  |
|  |  |  |  | 1725.6 ± 219.7 |
|  |  |  |  |  |
| 3-Cl Pool 10-21-11 | 0 | 112 | 151 |  |
|  | 0.05 | 169 | 175 |  |
|  | 0.1 | 201 | 253 |  |
|  | 0.2 | 278 | 415 |  |
|  | 0.3 | 365 | 472 |  |
|  | 0.5 | 596 | 740 |  |
|  | 1 | 919 |  |  |
|  |  |  |  | 854.2 ± 72.1 |
|  |  |  |  |  |
| 3-Cl Spa 10-21-11 | 0 | 112 | 151 |  |
|  | 0.001 | 121 |  |  |
|  | 0.005 | 113 |  |  |
|  | 0.01 | 110 |  |  |
|  | 0.05 | 139 | 247 |  |
|  | 0.1 | 214 | 346 |  |
|  | 0.2 | 225 | 516 |  |
|  | 0.3 | 418 | 692 |  |
|  |  |  |  | 1406.8 ± 243.7 |
|  |  |  |  |  |
| 4-Raw 11-8-11b | 0 | 108 | 151 | 128 |  |
|  | 0.001 | 111 | 127 | 156 |  |
|  | 0.005 | 95 | 145 | 128 |  |
|  | 0.01 | 119 | 136 | 118 |  |
|  | 0.05 | 115 | 130 | 149 |  |
|  | 0.1 | 102 | 128 | 135 |  |
|  | 0.2 | 112 | 121 | 165 |  |
|  | 0.3 | 116 | 140 | 180 |  |
|  | 0.5 | 127 | 123 | 174 |  |
|  | 1.0 | 115 | 130 | 163 |  |
|  |  |  |  | 0 (-S9), 0 (+S9) |
|  |  |  |  |  |
| 4-Cl Finished 11-8-11 | 0 | 108 | 151 |  |
|  | 0.001 | 88 |  |  |
|  | 0.005 | 97 |  |  |
|  | 0.01 | 102 |  |  |
|  | 0.05 | 98 |  |  |
|  | 0.1 | 120 | 147 |  |
|  | 0.2 | 184 | 182 |  |
|  | 0.3 | 195 | 227 |  |
|  | 0.5 | 237 | 253 |  |
|  | 1.0 | 343 | 371 |  |
|  |  |  |  | 254.1 ± 17.1 |
|  |  |  |  |  |
| 4-Cl Tap 11-9-11 | 0 | 108 | 151 |  |
|  | 0.001 | 144 |  |  |
|  | 0.005 | 121 |  |  |
|  | 0.01 | 115 |  |  |
|  | 0.05 | 120 |  |  |
|  | 0.1 | 159 | 161 |  |
|  | 0.2 | 171 | 177 |  |
|  | 0.3 | 215 | 275 |  |
|  | 0.5 | 274 | 300 |  |
|  |  |  |  | 337.4 ± 33.5 |
|  |  |  |  |  |
| 4-Cl Spa 11-9-11 | 0 | 108 | 151 |  |
|  | 0.001 | 133 |  |  |
|  | 0.005 | 103 |  |  |
|  | 0.01 | 113 |  |  |
|  | 0.05 | 128 |  |  |
|  | 0.1 | 139 | 147 |  |
|  | 0.2 | 185 | 182 |  |
|  | 0.3 | 217 | 238 |  |
|  | 0.5 | 254 | 342 |  |
|  | 1.0 | 430 | 525 |  |
|  |  |  |  | 361.3 ± 21.6 |
|  |  |  |  |  |
| 5-Cl Tap 2-7-12 | 0 | 105 | 103 |  |
|  | 0.001 | 123 | 116 |  |
|  | 0.005 | 125 | 115 |  |
|  | 0.01 | 100 | 92 |  |
|  | 0.05 | 115 | 126 |  |
|  | 0.1 | 147 | 106 |  |
|  | 0.2 | 203 | 176 |  |
|  | 0.3 | 231 | 256 |  |
|  | 0.5 | 420 | 345 |  |
|  | 1.0 | 590 | 485 |  |
|  |  |  |  | 453.0 ± 23.6 |
|  |  |  |  |  |
| 5-Br Spa 2-7-12 | 0 | 105 | 103 |  |
|  | 0.001 | 98 | 96 |  |
|  | 0.005 | 116 | 127 |  |
|  | 0.01 | 123 | 140 |  |
|  | 0.05 | 244 | 248 |  |
|  |  |  |  | 2894.6 ± 119.6 |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 6-O3-Cl Tap 12-22-11 | 0 | 105 | 103 |  |
|  | 0.001 | 104 | 98 |  |
|  | 0.005 | 128 | 100 |  |
|  | 0.01 | 120 | 104 |  |
|  | 0.05 | 112 | 97 |  |
|  | 0.1 | 106 | 116 |  |
|  | 0.2 | 106 | 121 |  |
|  | 0.3 | 148 | 152 |  |
|  | 0.5 | 178 | 145 |  |
|  | 1.0 | 229 | 193 |  |
|  |  |  |  | 108.1 ± 9.6 |
|  |  |  |  |  |
| 6-O3-Cl Pool 12-22-11 | 0 | 105 | 103 |  |
|  | 0.001 | 129 | 86 |  |
|  | 0.005 | 105 | 107 |  |
|  | 0.01 | 119 | 99 |  |
|  | 0.05 | 164 | 175 |  |
|  | 0.1 | 260 | 150 |  |
|  | 0.2 | 295 | 287 |  |
|  | 0.3 | 513 | 520 |  |
|  | 0.5 | 811 |  |  |
|  |  |  |  | 1359.1 ± 65.9 |
|  |  |  |  |  |
| 7-Tap-Ground Water 12-20-11b | 0 | 105 | 103 |  |
|  | 0.001 | 124 | 113 |  |
|  | 0.005 | 112 | 118 |  |
|  | 0.01 | 110 | 95 |  |
|  | 0.05 | 110 | 93 |  |
|  | 0.1 | 90 | 88 |  |
|  | 0.2 | 98 | 99 |  |
|  | 0.3 | 114 | 126 |  |
|  | 0.5 | 100 | 110 |  |
|  | 1.0 | 128 | 90 |  |
|  |  |  |  | 0 |
|  |  |  |  |  |
| 7-O3 Spa 12-20-11b | 0 | 105 | 103 |  |
|  | 0.001 | 114 | 105 |  |
|  | 0.005 | 90 | 111 |  |
|  | 0.01 | 85 | 90 |  |
|  | 0.05 | 99 | 101 |  |
|  | 0.1 | 90 | 90 |  |
|  | 0.2 | 100 | 122 |  |
|  | 0.3 | 114 | 114 |  |
|  | 0.5 | 122 | 104 |  |
|  | 1.0 | 124 | 71 |  |
|  |  |  |  | 0 |

aFor controls (0 dose) 3 plates were used, and the average rev/plate is shown for these controls in the table. In the absence of S9 (-S9), the mean ± SE values for the DMSO and positive controls were: DMSO –S9 (12 plates) 117.9 ± 8.3, sodium azide at 3 µg/plate (10 plates) 674.7 ± 64.1. In the presence of S9 (S9), the mean ± SE values for the DMSO and positive controls were: DMSO +S9 (3 plates) 128.0 ± 7.4, 2-aminoanthracene at 0.5 µg/plate (2 plates) 885.0 ± 9.9. Medium and S9 were checked for sterility and ability to support production of the expected number of rev/plate for each strain. TA100 was checked for the presence of the pKM101 plasmid by showing growth in the presence of ampicillin. The cell-wall (deep rough) mutation was confirmed by the killing of cells in the presence of crystal violet. The DNA excision-repair mutation (*uvrB*) was confirmed by increased sensitivity to killing of the cells by uv light.

bThese samples did not produce a number of rev/plate that reached a twofold increase relative to the DMSO control. Thus, they were not mutagenic and were assigned mutagenic potency of 0 rev/L-eq.