Data set consists of the primary data, i.e., the number of revertant (rev) colonies per petri plate relative to the dose of the extractable organic material (EOM) expressed as micrograms (µg) per petri plate. The various strains of *Salmonella* bacteria are listed in the first column. S9 is a homogenate of rat liver that contains cofactors that provides some aspects of mammalian metabolism to the petri dish. Experiments were performed with (+S9) and without (-S9) this metabolic activation. NaN3 is sodium azide, which is the positive control mutagen for strains TA100 and YG1042 –S9. 2AA is 2-aminoanthracene, which is the positive control mutagen for all of the strains +S9. 2NF is 2-nitrofluorene, which is the positive control mutagen for strains YG1041, TA98, and YG1024 –S9. MG is methylglyoxal, which is the positive control mutagen for strain TA104 –S9.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Mutagenicity of EOM of Oil-Burn Emissions** | | | | | | | | |
|  | Dose | Rev/platea | | | | | | |
|  | (µg EOM/ | -S9 | | |  | +S9 | | |
| Strain | plate) | Exp 1 | Exp 2 | Exp 3 |  | Exp 1 | Exp 2 | Exp 3 |
| TA100 | 0 | 127 | 121 |  |  | 130 | 120 |  |
|  | 1 | 108 |  |  |  | 130 |  |  |
|  | 5 | 112 |  |  |  | 158 |  |  |
|  | 10 | 168 | 149 |  |  | 258 | 269 |  |
|  | 25 | 195 | 175 |  |  | 383 | 416 |  |
|  | 50 | 229 | 182 |  |  | 599 | 529 |  |
|  | 100 | 245 | 264 |  |  | 809 | 707 |  |
|  | NaN3 | 722 | 732 |  |  |  |  |  |
|  | 2AA |  |  |  |  | 871 | 895 |  |
|  |  |  |  |  |  |  |  |  |
| YG1041 | 0 | 87 | 89 |  |  | 81 | 106 |  |
|  | 1 | 77 |  |  |  | 70 |  |  |
|  | 5 | 104 |  |  |  | 107 |  |  |
|  | 10 | 142 | 168 |  |  | 147 | 170 |  |
|  | 25 | 202 | 265 |  |  | 200 | 248 |  |
|  | 50 | 380 | 391 |  |  | 346 | 377 |  |
|  | 100 | 535 | 616 |  |  | 643 | 633 |  |
|  | 2NF | 1648 | 1547 |  |  |  |  |  |
|  | 2AA |  |  |  |  | 1237 | 1786 |  |
|  |  |  |  |  |  |  |  |  |
| TA98 | 0 | 43 | 56 |  |  | 49 | 64 |  |
|  | 10 | 44 | 60 |  |  | 86 | 92 |  |
|  | 25 | 70 | 82 |  |  | 99 | 102 |  |
|  | 50 | 106 | 95 |  |  | 161 | 152 |  |
|  | 100 | 115 | 119 |  |  | 256 | 250 |  |
|  | 2NF | 372 | 305 |  |  |  |  |  |
|  | 2AA |  |  |  |  | 297 | 594 |  |
|  |  |  |  |  |  |  |  |  |
| TA104 | 0 | 225 | 210 | 199 |  | 296 | 273 | 279 |
|  | 10 | 243 |  |  |  | 383 |  |  |
|  | 25 | 278 | 268 | 240 |  | 453 | 494 | 513 |
|  | 50 | 295 | 292 | 287 |  | 535 | 602 | 568 |
|  | 100 | 322 | 348 | 345 |  | 588 | 635 | 716 |
|  | 252.5 |  | 458 | 454 |  |  | 906 | 856 |
|  | MG | 1338 | 1563 | 1153 |  |  |  |  |
|  | 2AA |  |  |  |  | 497 | 655 | 565 |
|  |  |  |  |  |  |  |  |  |
| YG1024 | 0 | 30 | 33 |  |  | 46 | 48 |  |
|  | 10 | 99 | 50 |  |  | 108 | 94 |  |
|  | 25 | 120 | 90 |  |  | 222 | 128 |  |
|  | 50 | 177 | 132 |  |  | 345 | 215 |  |
|  | 100 | 199 | 181 |  |  | 360 | 323 |  |
|  | 2NF | 2116 | 2065 |  |  |  |  |  |
|  | 2AA |  |  |  |  | 1769 | 2226 |  |
|  |  |  |  |  |  |  |  |  |
| YG1042 | 0 | 108 | 108 |  |  | 112 | 123 |  |
|  | 10 | 138 | 133 |  |  | 253 | 215 |  |
|  | 25 | 188 | 155 |  |  | 362 | 312 |  |
|  | 50 | 167 | 181 |  |  | 554 | 414 |  |
|  | 100 | 232 | 191 |  |  | 711 | 599 |  |
|  | NaN3 | 977 | 956 |  |  |  |  |  |
|  | 2AA |  |  |  |  | 621 | 830 |  |

aData for DMSO (0) controls and the positive controls are the average of 3 plates each. Data for extract are single plates/dose for each experiment. The positive controls were 2-nitrofluorene (2NF) at 3 µg/plate, 2-aminoanthracene (2AA) at 0.5 µg/plate, sodium azide (NaN3) at 3 µg/plate, and methylglyoxal (MG) at 200 µg/plate.