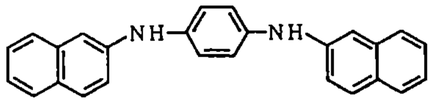
N,N'-Di-2-naphthyl-p-phenylenediamine
(N,N'-ジ-2-ナフチル-p-フェニレンジアミン)

Chemical Name: N,N'-Di-2-naphthyl-p-phenylenediamine
Synonym: N,N'-Di-β-naphthyl-p-phenylenediamine (DNPD); N,N'-Di-2-naphthalenyl-1,4-benzenediamine
Molecular weight: 360.46
Melting point: 225℃
Boiling point: ℃

Chemical Structure



CAS No: 93-46-9
MITI No: (4)-346

Source of Substance: Tokyo Kasei Kogyo Co. Ltd
Lot. No.: AG01
Purity: extra pure grade
Vehicle: DMSO

Mutagenicity
in Bacterial Test: Negative
IARC Evaluation: not yet cited

Experimental Data

Number of Revertants/plate

| Con. μg/plate | Base-substitution | | | | | | Frame-shift | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TA100 | | TA1535 | | WP2uvrA | | TA98 | | TA1537 | | TA1538 | |
| | S9- | S9+ | S9- | S9+ | S9- | S9+ | S9- | S9+ | S9- | S9+ | S9- | S9+ |
| DMSO | ( 105 ) | ( 124 ) | ( 23 ) | ( 16 ) | ( 36 ) | ( 38 ) | ( 20 ) | ( 28 ) | ( 9 ) | ( 15 ) | ( 17 ) | ( 21 ) |
| | 109 | 112 | 18 | 15 | 29 | 39 | 14 | 31 | 7 | 16 | 18 | 21 |
| | 123 | 123 | 19 | 18 | 30 | 35 | 16 | 25 | 6 | 10 | 10 | 22 |
| 20 | ( 116 ) | ( 118 ) | ( 19 ) | ( 17 ) | ( 30 ) | ( 37 ) | ( 15 ) | ( 28 ) | ( 7 ) | ( 13 ) | ( 14 ) | ( 22 ) |
| | 112 | 115 | 22 | 13 | 40 | 45 | 15 | 29 | 10 | 11 | 12 | 23 |
| | 116 | 104 | 30 | 19 | 44 | 47 | 16 | 35 | 9 | 12 | 10 | 23 |
| 50 | ( 114 ) | ( 110 ) | ( 26 ) | ( 16 ) | ( 42 ) | ( 46 ) | ( 16 ) | ( 32 ) | ( 10 ) | ( 12 ) | ( 11 ) | ( 23 ) |
| | 108 | 114 | 18 | 10 | 39 | 30 | 25 | 24 | 12 | 14 | 12 | 18 |
| | 103 | 104 | 15 | 12 | 50 | 49 | 16 | 28 | 6 | 11 | 14 | 23 |
| 100 | ( 106 ) | ( 109 ) | ( 17 ) | ( 11 ) | ( 45 ) | ( 40 ) | ( 21 ) | ( 26 ) | ( 9 ) | ( 13 ) | ( 13 ) | ( 21 ) |
| | 104 | 116 | 30 | 14 | 38 | 33 | 18 | 30 | 10 | 16 | 10 | 21 |
| | 104 | 120 | 24 | 20 | 44 | 41 | 16 | 38 | 8 | 11 | 10 | 16 |
| 200 | ( 104 ) | ( 118 ) | ( 27 ) | ( 17 ) | ( 41 ) | ( 37 ) | ( 17 ) | ( 34 ) | ( 9 ) | ( 14 ) | ( 10 ) | ( 19 ) |
| | 107 | 110 | 30 | 23 | 45 | 49 | 24 | 36 | 11 | 13 | 16 | 16 |
| | 122 | 119 | 23 | 19 | 50 | 54 | 25 | 37 | 11 | 16 | 10 | 25 |
| 500 | ( 115 ) | ( 115 ) | ( 27 ) | ( 21 ) | ( 48 ) | ( 52 ) | ( 25 ) | ( 37 ) | ( 11 ) | ( 15 ) | ( 13 ) | ( 21 ) |
| | 120 | 129 | 15 | 10 | 37 | 51 | 21 | 34 | 10 | 8 | 10 | 14 |
| | 105 | 118 | 19 | 16 | 31 | 33 | 23 | 45 | 11 | 11 | 12 | 15 |
| 1000 | ( 113 ) | ( 124 ) | ( 17 ) | ( 13 ) | ( 34 ) | ( 42 ) | ( 22 ) | ( 39 ) | ( 11 ) | ( 10 ) | ( 11 ) | ( 15 ) |
| | 124 | 115 | 20 | 12 | 33 | 53 | 18 | 26 | 8 | 13 | 9 | 20 |
| | 123 | 110 | 20 | 18 | 34 | 40 | 20 | 33 | 10 | 16 | 10 | 25 |
| 2000 | ( 124 ) | ( 113 ) | ( 20 ) | ( 15 ) | ( 34 ) | ( 47 ) | ( 19 ) | ( 30 ) | ( 9 ) | ( 15 ) | ( 10 ) | ( 23 ) |
| | 111 | 106 | 13 | 25 | 33 | 31 | 17 | 36 | 10 | 8 | 11 | 15 |
| | 105 | 130 | 18 | 20 | 31 | 21 | 17 | 32 | 10 | 10 | 12 | 23 |
| 5000 | ( 108 ) | ( 118 ) | ( 16 ) | ( 23 ) | ( 32 ) | ( 26 ) | ( 17 ) | ( 34 ) | ( 10 ) | ( 9 ) | ( 12 ) | ( 19 ) |
| Judgement | — | — | — | — | — | — | — | — | — | — | — | — |
| Specific Mutagenicity Positive Control | AF2 | 2AA 0.5 | $NaN_3$ | 2AA | AF2 | 2AA | AF2 | 2AA | 9AA | 2AA | 2NF | 2AA |
| | ( 315 ) | ( 568 ) | ( 272 ) | ( 152 ) | ( 225 ) | ( 974 ) | ( 287 ) | ( 399 ) | ( 854 ) | ( 414 ) | ( 335 ) | ( 435 ) |