**SUPPLEMENTARY MATERIAL**

**QSAR Study of octanol/water partition coefficient of organophosphorous compounds: Hybrid (GA/ MLR) Approach and Hybrid (GA/ ANN) Approach.**

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TABLE S-I. The model descriptors.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| COMPOSES | Log Kow | statue |  | | Polarizability | O-058 | nHAcc | E1u |
| Azinphos-ethyl | 3.18 | training |  | | 32.557 | 1 | 6 | 0.537 |
| Cyanophos | 2.65 | training |  | | 21.983 | 0 | 4 | 0.546 |
| Diazinon | 3.74 | training |  | | 29.723 | 0 | 5 | 0.686 |
| Dichlorvos | 1.16 | training |  | | 14.645 | 1 | 4 | 0.412 |
| Dicrotophos | -0.49 | training |  | | 19.566 | 2 | 6 | 0.61 |
| Disulfoton | 3.95 | training |  | | 26.844 | 0 | 2 | 0.569 |
| Ethoprophos | 3.59 | training |  | | 23.047 | 1 | 2 | 0.528 |
| Fenthion | 4.09 | training |  | | 26.801 | 0 | 3 | 0.556 |
| Fonofos | 3.94 | training |  | | 25.527 | 0 | 1 | 0.574 |
| Formothion | -0.56 | training |  | | 21.697 | 2 | 5 | 0.697 |
| Methamidophos | -0.8 | training |  | | 10.388 | 1 | 3 | 0.545 |
| Methidathion | 2.2 | training |  | | 25.408 | 1 | 6 | 0.627 |
| Mevinphos | 0.13 | training |  | | 17.017 | 2 | 6 | 0.543 |
| Naled | 1.38 | training |  | | 20.089 | 1 | 4 | 0.527 |
| Oxydemeton-methyl | -0.74 | training |  | | 17.583 | 2 | 4 | 0.689 |
| Phosalone | 4.3 | training |  | | 33.062 | 1 | 5 | 0.538 |
| Phosmet | 2.78 | training |  | | 28.748 | 2 | 5 | 0.584 |
| Phosphamidon | 0.79 | training |  | | 25.164 | 2 | 6 | 0.625 |
| Phoxim | 3.38 | training |  | | 28.422 | 0 | 5 | 0.608 |
| Pirimiphos-ethyl | 4.85 | training | |  | 32.909 | 0 | 6 | 0.63 |
| Pirimiphos-methyl | 4.2 | training | |  | 29.239 | 0 | 6 | 0.584 |
| Profenofos | 4.44 | training | |  | 29.393 | 1 | 3 | 0.51 |
| Propetamphos | 3.82 | training | |  | 26.396 | 1 | 5 | 0.579 |
| Sulprofos | 5.48 | training | |  | 32.834 | 0 | 2 | 0.47 |
| Temephos | 5.96 | training | |  | 42.488 | 0 | 6 | 0.595 |
| Tetrachlorvinphos | 3.53 | training | |  | 28.161 | 1 | 4 | 0.527 |
| Thiometon | 3.46 | training | |  | 23.174 | 0 | 2 | 0.644 |
| Trichlorfon | 0.51 | training | |  | 16.765 | 1 | 4 | 0.585 |
| Acephate | -0.89 | test | |  | 14.144 | 2 | 4 | 0.512 |
| Azamethiphos | 1.05 | test | |  | 25.523 | 2 | 7 | 0.606 |
| Azinphos-methyl | 2.56 | test | |  | 28.887 | 1 | 6 | 0.581 |
| Chlorfenvinphos | 3.95 | test | |  | 29.903 | 1 | 4 | 0.45 |
| Chlorpyrifos | 4.7 | test | |  | 28.876 | 0 | 4 | 0.458 |
| Chlorpyrifos methyl | 4.24 | test | |  | 25.206 | 0 | 4 | 0.535 |
| Dimethoate | 0.7 | test | |  | 19.776 | 1 | 4 | 0.552 |
| Ethion | 5.07 | test | |  | 34.069 | 0 | 4 | 0.768 |
| Etrimfos | 3.3 | test | |  | 26.69 | 0 | 6 | 0.482 |
| Fenitrothion | 3.43 | test | |  | 23.807 | 0 | 5 | 0.571 |
| Isazofos | 3.82 | test | |  | 27.689 | 0 | 5 | 0.588 |
| Isofenphos | 4.12 | test | |  | 34.413 | 1 | 5 | 0.451 |
| Malathion | 2.75 | test | |  | 28.96 | 2 | 6 | 0.506 |
| Phorate | 3.56 | test | |  | 25.009 | 0 | 2 | 0.526 |
| Terbufos | 4.48 | test | |  | 28.679 | 0 | 2 | 0.698 |

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