

Table 2: Exposure Summary^{1,2}

| Substance Name | Substance Abbreviation | SMILES ⁸ | Solubilization Vehicle | Concentration Range Evaluated (µg/mL) | Concentration Range Evaluated (mM) ¹ | Glyphosate on Product Label (%) | Glyphosate on Product Label (M) ² |
|--|------------------------|---|------------------------|---------------------------------------|---|---------------------------------|--|
| Glyphosate ³ | Glyphosate | <chem>OC(=O)CNCPO(O)=O</chem> | H ₂ O | 0.267 – 8,454 | 1.58x10 ⁻³ – 50 | | |
| Glyphosate isopropylamine ⁴ | G-IPA | <chem>CC(C)N.OC(=O)CNCPO(O)=O</chem> | H ₂ O | 0.361 – 11,409 | 1.58x10 ⁻³ – 50 | | |
| AMPA ⁵ | AMPA | <chem>NCP(O)(O)=O</chem> | H ₂ O | 0.175 – 5,552 | 1.58x10 ⁻³ – 50 | | |
| Diquat ⁶ | Diquat | <chem>O.[Br-].[Br-].C1C[N+]2=C(C=CC=C2)C2=[N+]1C=CC=C2</chem> | H ₂ O | 0.570 – 18,103 | 1.58x10 ⁻³ – 50 | | |
| Mesotrione ⁷ | Mesotrione | <chem>CS(=O)(=O)C1=CC(=C(C=C1)C(=O)C1C(=O)CCCC1=O)[N+](=[O-])=O</chem> | H ₂ O | 0.268 – 8,483 | 7.90x10 ⁻⁴ – 25 | | |
| Metolachlor ⁷ | Metolachlor | <chem>CCCC1=C(N(C(C)COC)C(=O)CC)C(C)=CC=C1</chem> | DMSO | 0.00897 - 284 | 3.16x10 ⁻⁵ – 1.0 | | |
| Hi-Yield® KILLZALL™ II | GBF-A | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.100 – 3,173 | 6.56x10 ⁻⁶ – 0.209 | 1.92 | 0.08 |
| Roundup® Concentrate Plus | GBF-B | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.0807 – 2,551 | 6.38x10 ⁻⁵ – 2.02 | 18.0 | 0.84 |
| Halex® GT | GBF-C | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.122 – 3,842 | 1.47x10 ⁻⁴ – 4.65 | 20.5 | 1.48 |
| GlyStar® Plus | GBF-D | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.112 – 3,516 | 2.00x10 ⁻⁴ – 6.32 | 41.0 | 2.11 |
| Cornerstone® Plus | GBF-E | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.113 – 3,580 | 2.00x10 ⁻⁴ – 6.44 | 41.0 | 2.11 |
| Buccaneer® Plus | GBF-F | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.114 – 3,605 | 2.05x10 ⁻⁴ – 6.48 | 41.0 | 2.11 |
| Remuda® Full | GBF-G | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.115 – 3,644 | 2.07x10 ⁻⁴ – 6.55 | 41.0 | 2.11 |
| Touchdown Total® | GBF-H | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.106 – 3,360 | 2.09x10 ⁻⁴ – 6.62 | 44.9 | 2.96 |
| Roundup PowerMAX® | GBF-I | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.128 – 4,033 | 3.00x10 ⁻⁴ – 9.49 | 48.7 | 3.19 |
| Roundup WeatherMAX® | GBF-J | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.128 – 4,050 | 9.05x10 ⁻⁵ – 2.87 | 48.8 | 3.19 |
| Roundup® Super Concentrate | GBF-K | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.0802 – 2,535 | 1.80x10 ⁻⁴ – 5.58 | 50.2 | 2.55 |
| Durango DMA | GBF-L | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.116 – 3,667 | 2.70x10 ⁻⁴ – 8.61 | 50.2 | 2.84 |
| Roundup Custom® | GBF-M | <chem>OC(=O)CNCPO(O)=O⁹</chem> | H ₂ O | 0.115 – 3,639 | 2.70x10 ⁻⁴ – 8.46 | 53.8 | 2.84 |
| TBHP | TBHP | <chem>CC(C)(C)OO</chem> | H ₂ O | 0.00284 – 90.1 | 3.15x10 ⁻⁵ – 0.100 | | |
| Menadione | Menadione | <chem>CC1=CC(=O)C2=C(C=CC=C2)C1=O</chem> | DMSO | 5.42x10 ⁻⁴ – 17.2 | 3.15x10 ⁻⁶ – 0.100 | | |
| Sucrose | Sucrose | <chem>OC[C@H]1O[C@@H](CO)[C@@H](O)[C@@H]2O[C@H](CO)[C@@H](O)[C@@H]2O</chem> | H ₂ O | 0.0108 – 342 | 3.15x10 ⁻⁵ – 1.00 | | |
| Potassium Chloride | KCl | <chem>[Cl-].[K+]</chem> | H ₂ O | 0.00235 – 74.6 | 3.15x10 ⁻⁵ – 1.00 | | |
| Antimycin | Antimycin | <chem>CCCCC[C@@H]1[C@@H]([C@@H](OC(=O)[C@H]([C@@H](OC1=O)C)NC(=O)C2=C(C(=CC=C2)NC=O)O)C)OC(=O)CC(C)C</chem> | DMSO | 1.73x10 ⁻⁴ – 5.49 | 3.15x10 ⁻⁷ – 0.0100 | | |
| Etoposide | Etoposide | <chem>[H][C@]12COC(=O)[C@]1([H])[C@@H](C1=CC(OC)=C(O)C(OC)=C1)C1=CC3=C(O)CO3)C=C1[C@H]2O[C@]1([H])O[C@]2([H])CO[C@@H](C)O[C@@]2([H])[C@@H](O)[C@H]1O</chem> | DMSO | 0.00930 – 294 | 1.58x10 ⁻⁵ – 0.500 | | |

¹GBF molar concentration ranges reflect only glyphosate concentrations.

²Calculated based on the free acid form of glyphosate.

³Present in all GBFs.

⁴Present in Buccaneer® Plus, Cornerstone® Plus, GlyStar® Plus, Roundup® Custom, and Touchdown Total®.

⁵Microbial metabolite of glyphosate.

⁶Present in Roundup® Weed and Grass Killer Concentrate Plus (GBF-B).

⁷Present in Halex® GT.

⁸All GBF SMILES show only glyphosate structure due to lack of knowledge of other constituents

⁹SMILES for GBFs only reflect glyphosate structure