

# IRAC Codes for some Insecticides

Group	Common Name	Brand Name(s)
1A	Carbaryl	Sevin XLR and others
1A	Methomyl	Lannate
1A	Thiodicarb	Larvin
1B	Acephate	Orthene and others
1B	Chlorpyrifos	Lorsban and others
1B	Dimethoate	Dimethoate and others
1B	Methyl parathion	Penncap-M and others
1B	Phorate	Thimet
2B	Chlorantraniliprole	Altacor, Coregen, Prevathon, Voliam Xpress
2B	Flubendiamide	Belt, Symapse
3 (A)	Beta-cyfluthrin	Baythroid
3 (A)	Bifenthrin	Capture and others
3 (A)	Cyfluthrin	Decathlon, Renounce, Tempo, Tombstone
3 (A)	Deltamethrin	Battalion and others
3 (A)	Esfenvalerate	Asana XL and others
3 (A)	Gamma-cyhalothrin	Poraxis and others
3 (A)	Lambdacyhalothrin	Warrior and others
3 (A)	Permethrin	Ambush, Pounce, and others
3 (A)	Piperonyl butoxide	Everygreen (has two active ingredients)
3 (A)	Zeta-cypermethrin	Mustang and others
4A	Acetamiprid	Assail, Tristar
4A	Clothianidin	Poncho and others
4A	Imidacloprid	Gaucho and others
4A	Thiamethoxam	Cruiser and others
5	Spinetoram	Delegate, Radiant
5	Spinosad	Blackhawk, Entrust, and others
11	Bacillus thuringiensis	Dipel and others
18	Methoxyfenozide	Intrepid

<i>Main Group and Primary Site of Action</i>	<b>Chemical Sub-group or exemplifying Active Ingredient</b>
<b>1 Acetylcholinesterase (AChE) inhibitors</b> Nerve action	<b>1A</b> Carbamates <b>1B</b> Organophosphates
<b>2 GABA-gated chloride channel antagonists</b> Nerve action	<b>2A</b> Cyclodiene organochlorines (Chlordane, Endosulfan) <b>2B</b> Phenylpyrazoles (Fiproles)
<b>3 Sodium channel modulators</b> Nerve action	<b>3A</b> Pyrethroids, Pyrethrins <b>3B</b> DDT, Methoxychlor
<b>4 Nicotinic acetylcholine receptor (nAChR) agonists</b> Nerve action	<b>4A</b> Neonicotinoids <b>4B</b> Nicotine
<b>5 Nicotinic acetylcholine receptor (nAChR) allosteric activators</b> Nerve action	Spinosyns
<b>11 Microbial disruptors of insect midgut membranes</b>	<i>Bacillus thuringiensis</i> or <i>Bacillus sphaericus</i> and the insecticidal proteins they produce
<b>18 Ecdysone receptor agonists</b> Growth regulation	Diacylhydrazines

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