

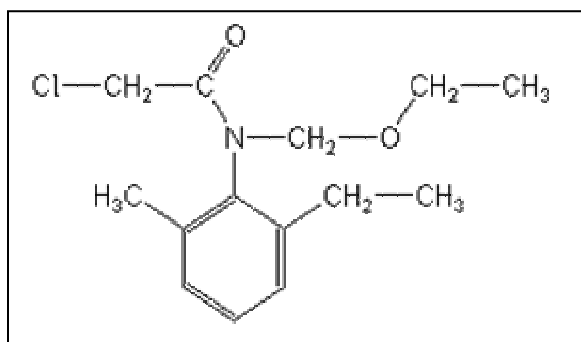
## ***ELISA Kit for Agricultural Pollutants***

# ***Acetochlor ELISA Kit***

### ***(Magnetic Particle Format)***

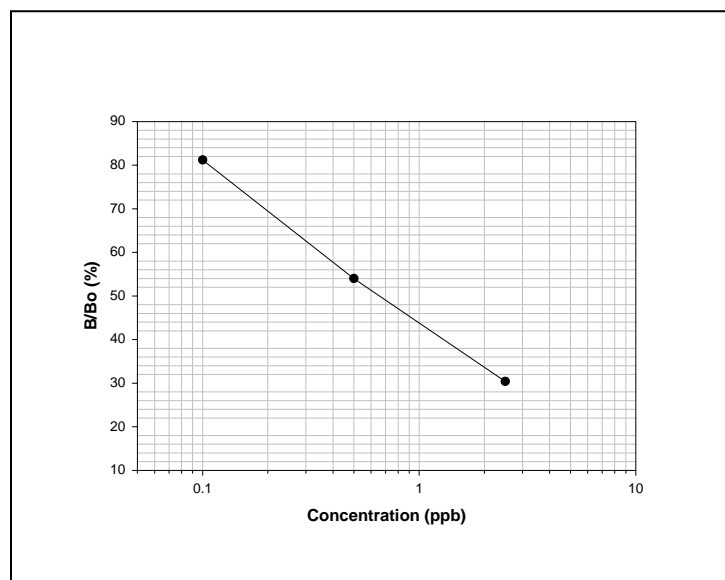
- ◇ The antibody binds Acetochlor and related Chloroacetanilides and does not cross-react with other non-related agricultural compounds.
- ◇ The assay range is between 0.10 ppb and 2.5 ppb. This supersensitive assay allows the determination of Acetochlor and related Chloroacetanilides in a range of environmental samples (water, soil, sediment, fish plasma, etc.).
- ◇ Direct sample. No time-consuming sample extraction or the use of hazardous organic solvents.
- ◇ Total time for measurement is less than 45 minutes.
- ◇ The kit (100 Tests), a magnetic particle format with ready to use reagents, enables faster assay kinetics, super sensitivity, and the simultaneous measurement of multiple samples at a reasonable cost.

### **Chemical Structure**



Acetochlor is used for the control of most annual grasses and certain broadleaf weeds and yellow nutsedge. Crops include cabbage, citrus, coffee, corn, cotton, green peas, maize, onions, orchards, peanuts, potatoes, rape, soybeans, sugarbeets, sunflower, and vineyards. Acetochlor is applied pre-emergence and belongs to the class of Chloroacetanilide herbicides that includes alachlor and metolachlor. Acetochlor has been found under certain conditions to contaminate ground water, but it is mostly found in surface water. This ELISA test kit detects Acetochlor and related Chloroacetanilides in environment samples at the ppt levels.

### **Acetochlor Standard Curve**



Samples containing Acetochlor within the dynamic range (0.1-2.5 ppb) can be directly tested in the assay after filtration.



## Basic Test procedure

- Add 200 uL of sample, 250 uL enzyme conjugate, and 500 uL of antibody coupled magnetic particles. Vortex.
- Incubate for 20 minutes.
- Separate using the magnetic separator, decant and wash.
- Add 500 uL of color solution.
- Incubate 20 minutes.
- Stop the reaction and read color at 450 nm. Quantitate results.

## Cross-reactivity Pattern

Cross-reactivity of the Abraxis Acetochlor ELISA expressed as the least detectable dose (LDD) which is estimated at 90% B/Bo and at the concentration required to displace 50% (50% B/Bo).

Compound	LDD (ppb)	50% B/Bo (ppb)
Acetochlor	0.042	0.60
Alachlor	0.045	0.70
Metolachlor	0.110	1.60
Butachlor	0.92	20
Alachlor Sulfonic Acid	9.2	224
Acetochlor Sulfonic Acid	15	78
Alachlor Oxalinic Acid	16.8	496
Metalaxyl	68	1,600
Acetochlor Oxalinic Acid	130	680
Propachlor	8,000	>10,000

The following compounds demonstrated no reactivity in the Acetochlor Assay when tested at concentrations up to 1,000 ppb: aldicarb, aldicarb sulfoxide, aldicarb sulfone, atrazine, ametryn benomyl, butachlor, butylate, captan, carbaryl, carbendazim, carbofuran, 2,4-D, 1,3-dichloropropene, dinoseb, MCPA, metribuzin, PCP, picloram, propazine, simazine, terbufos, thiabendazole, thiophanate-methyl.

## Kit Format

**Acetochlor ELISA Kit (Magnetic Particle format, 100T) PN 500021**

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