

**Organic Geochemistry Research Laboratory Services
Lawrence, Kansas – FY 2014**

Methods analyzed by Liquid Chromatography/Mass Spectrometry

Triazine and Phenylurea Parents and Degradation Products

Analysis Code: LCEA

APPROVED USGS METHOD – 0-2138-02 – OFR 02-436

Triazines

(0.020 µg/L reporting limit)

Atrazine

Bromacil

Cyanazine

Prometon

Propazine

Simazine

*Deethylatrazine (DEA)

*Deisopropylatrazine (DIA)

*Hydroxyatrazine (HA)

*Hydroxysimazine

*Deethylhydroxyatrazine (DEHA)

*Deisopropylhydroxyatrazine (DIHA)

*Deethyldeisopropylatrazine/Didealkylatrazine (DDA)

*Cyanazine acid (CAC)

*Cyanazine amide (CAM)

*Deethylcyanazine acid (DCAC)

*Deethylcyanazine amide (DCAM)

(0.20 µg/L reporting limit)

*Deethylcyanazine (DEC)

Phenylureas

(0.20 µg/L reporting limit)

Diuron

Fluometuron

*DMFM (demethylfluometuron)

Linuron

* Degradation product

Acetamide Parents and Degradation Products – on-line extraction

Analysis Code: LCPD

APPROVED USGS METHOD – 0-2139-03 - OFR 03-173

(0.02 µg/L reporting limit)

Acetochlor

*Acetochlor deschloro**

*Acetochlor ESA (ethane sulfonic acid)

*Acetochlor hydroxy**

*Acetochlor OXA (oxanilic acid)

*Acetochlor SAA (sulfynil acetic acid)

*Acetochlor/metolachlor – 2nd amide**

*Acetochlor/metolachlor ESA – 2nd amide

Alachlor

*Alachlor – 2nd amide**

*Alachlor deschloro**

*Alachlor ESA

*Alachlor hydroxy**

*Alachlor OXA

*Alachlor SAA

*Alachlor ESA – 2nd amide

Dimethenamid

*Dimethenamid deschloro**

*Dimethenamid ESA

*Dimethenamid hydroxy**

*Dimethenamid OXA

Flufenacet

*Flufenacet ESA

*Flufenacet OXA

Metolachlor

*Metolachlor deschloro**

*Metolachlor ESA

*Metolachlor hydroxy**

*Metolachlor OXA

Propachlor

*Propachlor OXA

(0.05 µg/L reporting limit)

*Propachlor ESA

* Degradation product

** This compound will be included in the updated Approved USGS Method report

Glyphosate, AMPA, and Glufosinate—on-line extraction: Water

Analysis Code: LCGY

APPROVED USGS METHOD – O-2141-09

(0.02µg/L reporting limit)

Glyphosate

*Aminomethylphosphonic Acid (AMPA)

Glufosinate

Four Class Antibiotic Method: Water

Analysis Code: LCAB

Fluoroquinolones- (0.005 µg/L reporting limit)

Ciprofloxacin

Enrofloxacin

Lomefloxacin

Norfloxacin

Ofloxacin

Sarafloxacin

Macrolides

Azithromycin (0.005 µg/L reporting limit)

Erythromycin (0.008 µg/L reporting limit)

*Erythromycin-H₂O (0.005 µg/L reporting limit)

Roxithromycin (0.005 µg/L reporting limit)

Tylosin (0.010 µg/L reporting limit)

Virginiamycin (0.005 µg/L reporting limit)

Sulfonamides

Sulfachloropyridazine (0.005 µg/L reporting limit)

Sulfadiazine (0.100 µg/L reporting limit)

Sulfadimethoxine (0.005 µg/L reporting limit)

Sulfamethoxazole (0.005 µg/L reporting limit)

Sulfamethazine (0.005 µg/L reporting limit)

Sulfathiazole (0.050 µg/L reporting limit)

Tetracyclines - (0.010 µg/L reporting limit)

Chlorotetracycline

Oxytetracycline

Tetracycline

Doxycycline

*Epi-chlorotetracycline

*Epi-iso-chlorotetracycline

*Epi-oxytetracycline

*Epi-tetracycline

*Iso-chlorotetracycline

***Degradation product**

Analysis Code: LCAB--continued

Pharmaceuticals

Carbamazepine (0.005 µg/L reporting limit)

Ibuprofen (0.050 µg/L reporting limit)

Others

Chloramphenicol (0.100 µg/L reporting limit)

Lincomycin (0.005 µg/L reporting limit)

Ormetoprim (0.005 µg/L reporting limit)

Trimethoprim (0.005 µg/L reporting limit)

Immunoassay

17 Beta Estradiol (E2) (0.0015 µg/L reporting limit)

Analysis Code: IMB

Atrazine (0.10 µg/L reporting limit)

Analysis Code: IMA

Microcystin Total (0.10 µg/L reporting limit)

Analysis Code: IMNT

Microcystin Dissolved (0.10 µg/L reporting limit)

Analysis Code: IMND

Saxitoxin Total (0.02 µg/L reporting limit)

Analysis Code: IMXT

Saxitoxin Dissolved (0.02 µg/L reporting limit)

Analysis Code: IMXD

Cylindrospermopsin Total (0.05 µg/L reporting limit)

Analysis Code: IMYT

Cylindrospermopsin Dissolved (0.05 µg/L reporting limit)

Analysis Code: IMYD

****Other Immunoassay analysis potentially available upon request**

Custom Methods: Call to discuss (785)-832-3564

Isoxaflutole and Degradation Products: Water

Analysis Code: LCIX

Isoxaflutole (0.003 µg/L reporting limit)

*Di-keto (0.002 µg/L reporting limit)

*Benzoic Acid (0.003 µg/L reporting limit)

Glyphosate, AMPA, and Glufosinate–on-line extraction: Soil

Analysis Code: LCGS

(1-10 µg/Kg reporting limit)

Glyphosate

*Aminomethylphosphonic Acid (AMPA)

Glufosinate

Algal Toxins: Water

Analysis Code: LCTX

Anatoxin-a (ANTA)

Cylindrospermopsin (CYLS)

Domoic Acid (DMAC)

Lyngbyatoxin-a (LYGA)

Microcystin LA (MCLA)

Microcystin LF (MCLF)

Microcystin LR (MCLR)

Microcystin LW (MCLW)

Microcystin LY (MCLY)

Microcystin RR (MCRR)

Microcystin YR (MCYR)

Nodularin R (NDLR)

Okadaic Acid (OKAC)

*** Degradation product**