



LITCHFIELD ANALYTICAL SERVICES

P.O. Box 457
535 Marshall Street
Litchfield, MI 49252

Phone: (517)-542-2915
email: litchlab@qcnet.net

Fax: (517)-542-2014
web page: litchlab.com

Feeds Forages Mycotoxins Soils Plant Tissues Manure Fertilizers Lime Water

Quick Turnaround

Quality Testing

Personalized Service

Competitive Rates

Litchfield Analytical Services was founded in 1982 to provide feed and forage analysis services for livestock producers, nutritionists, feed dealers, and feed manufacturers. We have offered both Wet Chemistry and Near Infrared Reflectance Spectrophotometry (NIRS) procedures since 1984. The agronomy department was added in 1998. Our staff is trained and experienced in feed, mycotoxin, soil, plant tissue, manure, greenhouse media, fertilizer, lime, and water analysis which ensures you of accurate and reliable results. We use modern, well-maintained, and daily-calibrated equipment to perform valid analytical procedures as prescribed by the Association of Official Analytical Chemists (AOAC). Standard Operating Procedures include precautions to prevent contamination and provide a safe work environment. Litchfield Analytical Services is accredited by The National Forage Testing Association (NFTA), The National Hay Association (NHA), The American Forage and Grassland Council (AFGC), The North American Proficiency Testing Program (NAPT), and the Minnesota Department of Agriculture (MNDA) for laboratory testing proficiency. We participate in the sample exchange program with the Association of Florida Phosphate Chemists (AFPC) and we are members of the Michigan Agri-Business Association (MABA). Located in Southern Michigan, Litchfield Analytical Services has built a solid reputation in Michigan, Ohio, and Indiana for quality testing, personalized service, and quick turnaround. We are committed to maintain this reputation as we grow our business.

Schedule of Fees

April 1, 2008

Turnaround Time for Routine Testing

NIR Feed Tests	24 hours	Water Tests	96 hours
NW Feed Tests	48 hours	Manure Tests	96 hours
NIRosu, NIRd, NWosu, & NWd Feed Tests	120 hours	Fertilizer & Lime Tests	96 hours
Wet Chemistry Feed Tests	72 hours	Plant Tissue Tests	48 hours
ELISA Mycotoxin Tests	72 hours	Soil Nitrate Tests	24 hours
TLC Mycotoxin Tests	120 hours	Soil & Greenhouse Testing	72 hours

Turnaround time for non-routine analysis is dependent upon the test being performed. RUSH results may be available when prior arrangements are made. An additional RUSH fee of up to \$50.00 per sample will be charged.

Sample Supplies / Mailers

For your convenience, postage-paid mailers are provided for feed samples. \$3.00 per sample is charged for postage when samples are received. Oversized samples (samples weighing more than 320 grams) are charged additional postage.

Postage-paid feed mailers, soil sample bags, 125ml bottles (fertilizer), and 500ml bottles (water & manure samples), sample information forms & mailing labels are provided at no additional charge for submitting samples to Litchfield Analytical Services.

Reporting Procedures

Sample results can be mailed, faxed, or emailed at no additional charge. A \$2.00 per sample fee will be added for mailing or faxing to a third-party.

Terms of Sale

All prices are subject to change without notice. Invoices are issued on the 15th and 30th of each month for work performed. Payment is due within 30 days from the date of invoice. A finance charge of 2% per month (24% per annum) of the outstanding invoice amount is added to past due invoices. The minimum finance charge is \$2.00 per past due invoice per semi-monthly statement period.

Discounts

Discounts may be available for large volumes of samples or contract work. Contact the laboratory for more information. No discounts will be allowed on overdue accounts.

Re-Assay Policy

Results questioned by the client will be re-assayed upon request. No charge will be made unless the re-assay confirms the original results.

Sample Holding & Disposal

Samples are held for varying lengths of time, depending on their stability and the amount of storage space required. All samples will be held a minimum of two weeks after results are reported. If longer storage is necessary, a storage fee will be charged based on the type of sample being held. Samples that require special disposal will be returned after analysis at the client's expense. There will be a \$5.00 minimum charge for returning samples and / or containers.

Unusual Samples

Fees are quoted based on standard sample preparation procedures. We reserve the right to assess additional preparation fees for samples with unusually high concentrations of the analyte, or those requiring special handling, special preparation, or non-standard analytical methods.

Confidentiality

All work is performed in confidence. Results are released only to the client or his / her designated agent. Confidentiality agreements will be provided upon request.

Warranty & Limits of Liability

Warranty is limited to the accuracy of analysis of the sample as received. We assume no responsibility for the purposes for which the client uses the test results, nor liability for any other warranties, expressed or implied, including warranties of fitness for a particular purpose or for merchantability made by the client. These terms and conditions shall supersede any conflicting terms and conditions stated on any purchase order, or other order of work submitted by the client.

NIR Feed & Forage Test Packages

NIR:	Moisture, Crude Protein, ADF, NDF, ADFIN (forages only), Ca, P, Mg, K, PSU Energy Values, RFV (forages), Non-Fiber Carbohydrates (forages), & Protein Solubility (forages).	\$ 11.00
NIRosu:	Moisture, Crude Protein, ADF, NDF, ADFIN (forages only), NDFIN (forages only), Lignin, Ash, Fat, Ca, P, Mg, K, S, OSU Energy Values, RFV (forages), NFC (forages), Protein Solubility (forages), & RUP.	\$ 16.00
NIRd	Moisture, Crude Protein, ADF, NDF, ADFIN (forages only), NDFIN (forages only), Lignin, Ash, Fat, Starch, Sugar, 30IVDMd, 30IVNDFd, Ca, P, Mg, K, S, OSU Energy Values, RFV (forages), RFQ (Forages), NFC (forages), Protein Solubility (forages), & RUP. A Milk per Ton (Milk2006) report is available upon request for corn silage.	\$ 24.00

NW Feed & Forage Test Packages

NW:	Test NIR with wet chemistry minerals (Ca, P, K, Mg, Na, Cu, Fe, Mn, & Zn)	\$ 20.00
NWosu:	Test NIRosu with wet chemistry minerals (Ca, P, K, Mg, Na, Cu, Fe, Mn, & Zn)	\$ 24.00
NWd:	Test NIRd with wet chemistry minerals (Ca, P, K, Mg, Na, Cu, Fe, Mn, & Zn)	\$ 32.00

Wet Chemistry Feed & Forage Test Packages

DM:	Moisture & Dry Matter	\$ 6.00
1:	Moisture & Crude Protein	\$ 12.00
2:	Moisture, Crude Protein, Ca, P, K, Mg, Na, Cu, Fe, Mn, & Zn	\$ 17.00
3:	Moisture, Crude Protein, Ca, P, K, Mg, Na, Cu, Fe, Mn, Zn, ADF & Energy Values	\$ 22.00
4:	Moisture, Crude Protein, Ca, P, K, Mg, Na, Cu, Fe, Mn, Zn, ADF, Energy Values, NDF, RFV & NFC.	\$ 27.00
5:	Moisture, Crude Protein, Ca, P, K, Mg, Na, Cu, Fe, Mn, Zn, ADF, Energy Values, NDF, RFV, NFC, Sulfur & Chlorides	\$ 35.00
Prox:	Moisture, Crude Protein, Fat (Ether Extract), Ash, Crude Fiber, Ca, P, K, Mg, Na, Cu, Fe, Mn, Zn, TDN & Energy Values	\$ 39.00
DCAD:	Moisture Ca, P, K, Mg, Na, Cu, Fe, Mn, Zn, S, Cl, & DCAD calculations.	\$ 26.00
MinMix:	Mineral analysis for mineral concentrates including Ca, P, K, Mg, Na, Cu, Fe, Mn, Zn, S & B	\$ 50.00
OSU Pkg:	Add Lignin, Fat, Ash, ADFIN, NDFIN & OSU Energy Values to Test 4 or higher	\$ 24.00
CPM30 Pkg	Add Lignin, Fat, Ash, ADFIN, NDFIN, Starch, Sugar, 30IVDMd & OSU Energy Values to Test 4 or higher. A Milk 2006 report with Schwab – Shaver Energy Values & Milk / Ton is available upon request for corn silage.	\$ 58.00
Ferm:	Fermentation Analysis. Includes Moisture, pH, Titratable Acidity, Lactic Acid, Acetic Acid, Propionic Acid, Iso-butyric Acid, Butyric Acid, Total Volatile Fatty Acids, and Ammonia.	\$ 30.00
VFA/Ethanol:	Includes Moisture, pH, Titratable Acidity, Lactic Acid, Acetic Acid, Propionic Acid, Iso-butyric Acid, Butyric Acid, Total Volatile Fatty Acids, Ethanol, and Ammonia.	\$ 40.00
Sugar Profile:	Total Starch, Fructose, Glucose, Sucrose, Maltose, and Lactose	\$ 150.00

Equus Is For Horses

Equus:	Everyday nutritional information for the everyday horse. <i>Moisture, DM, Crude Protein Digestible Energy, ADF, NDF, Estimated Crude Fiber, Non-Fiber Carbohydrates, P, Ca, K, Mg, Na, Cu, Fe, Zn, & Mn.</i>	\$ 27.00
EquusPlus:	Nutritional information for the metabolically challenged horse (Cushings, Insulin Resistant, Type 2 Diabetes, Geriatric Horses, HYPP, etc.). <i>Moisture, DM, Crude Protein, Digestible Energy, ADF, NDF, Estimated Crude Fiber, Non-Fiber Carbohydrates, Starch,, Sugars, Non-Structural Carbohydrates, P, Ca, K, Mg, Na, Cu, Fe, Zn, & Mn.</i>	\$ 49.00
EquusPro:	Nutritional information for the intensively trained horse and for brood mares during pregnancy. <i>Moisture, DM, Crude Protein, Digestible Energy, ADF, NDF, Estimated Crude Fiber, Non-Fiber Carbohydrates, Starch, Sugars, Non-Structural Carbohydrates, Fat, Ash, Lignin, P, Ca, K, Mg, Na, Cu, Fe, Zn, & Mn.</i>	\$ 79.00

Additional Feed & Forage Test Procedures (with NIR, NW, DM, I -5, or Prox)

Ammonia, Water Extractable (NH ₄)	\$ 6.00	Molybdenum (Mo)	\$ 20.00
Aluminum (Al)	\$ 10.00	Nitrate, Water Extractable (NO ₃)	\$ 12.00
Ash (Ash)	\$ 6.00	Nitrite, Water Extractable (NO ₂)	\$ 15.00
Boron (B)	\$ 6.00	Nitrogen, Non Protein (NPN)	\$ 20.00
Brix (Brix)	\$ 40.00	Nitrogen, Total (TI N)	\$ 15.00
Calcium (Ca)	\$ 6.00	Nitrogen, Urea (Urea-N)	\$ 20.00
Chlorides (Cl)	\$ 9.00	NSC-Includes Starch & Sugars	\$ 32.00
Cobalt (Co)	\$ 20.00	Penn State Particle Length (M)	\$ 9.00
Copper (Cu)	\$ 6.00	Pepsin Digestibility	\$ 50.00
Corn Silage Processing Score	\$ 25.00	pH (pH)	\$ 6.00
Ethanol	\$ 150.00	Phosphorus (P)	\$ 6.00
Fat, Acid Hydrolysis (AHFat)	\$ 25.00	Potassium (K)	\$ 6.00
Fat, Ether Extract (Fat)	\$ 9.00	Protein, Crude (CP)	\$ 7.00
Fiber, Acid Detergent (ADF)	\$ 6.00	Protein, ADF Insoluble (H) *	\$ 6.00
Fiber, Crude (CF)	\$ 10.00	Protein, NDF Insoluble (NDF-IN) **	\$ 6.00
Fiber, Neutral Detergent (NDF)	\$ 6.00	Protein Dispersibility Index (PDI)	\$ 40.00
Fiber, Physically Effective NDF (peNDF)	\$ 20.00	Protein, Rumen Undegradable (RUP)	\$ 25.00
Fluoride (F)	\$ 20.00	Protein Solubility (S)	\$ 6.00
Glycerin / Glycerol	\$ 100.00	Prussic Acid / Cyanide (HCN)	\$ 60.00
InVitro DMd (24, 30, or 48 hr)	\$ 20.00	Salt, Calculated from Chloride	\$ 11.00
InVitro 6 hr Starchd (Includes Starch)	\$ 50.00	Selenium (Se)	\$ 38.00
Iodine (I)	\$ 160.00	Starch, Degree of Starch Access (DSA)	\$ 36.00
Iron (Fe)	\$ 6.00	Starch, Enzyme Available (Ungelatinized)	\$ 15.00
Kansas State Micron Analysis	\$ 25.00	Starch, Total (Starch)	\$ 20.00
Lignin (L) *	\$ 6.00	Sodium (Na)	\$ 6.00
Magnesium (Mg)	\$ 6.00	Sugars, Total (Sugars)	\$ 17.00
Manganese (Mn)	\$ 6.00	Sulfur (Sul)	\$ 8.00
Methanol	\$ 250.00	Zinc (Zn)	\$ 6.00
Mold Count (Mold Cnt)	\$ 25.00		

* With Test 3 or Higher

** With Test 4 or Higher

Feed & Forage Vitamin Tests

Beta Carotene	\$ 110.00	Vitamin B ₆ (Pyridoxine)	\$ 130.00
Biotin	\$ 140.00	Vitamin B ₁₂ (Cyanocobalamin)	\$ 140.00
Carotene	\$ 60.00	Vitamin C (Ascorbic Acid)	\$ 100.00
Choline	\$ 230.00	Vitamin D, High Level	\$ 160.00
Folic Acid,	\$ 150.00	Vitamin D, Low Level	\$ 260.00
Niacin	\$ 90.00	Vitamin E, (Acetate), High Level	\$ 120.00
Pantothenic Acid	\$ 130.00	Vitamin E (Acetate), Low Level	\$ 160.00
Vitamin A (True, Retinol)	\$ 140.00	Vitamin K ₃ (Menadione), High Level	\$ 150.00
Vitamin B ₁ (Thiamine),	\$ 90.00	Vitamin K ₃ (Menadione), Low Level	\$ 250.00
Vitamin B ₂ (Riboflavin)	\$ 90.00	Xanthophyll	\$ 70.00

Feed & Forage Amino Acid Tests

AAcid Profile: Alanine, Arginine, Aspartic Acid, Cystine, Glutamic Acid, Glycine, Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Proline, Serine, Threonine, Tryptophan, Tyrosine, & Valine.			\$ 325.00
Alanine	\$ 120.00	Lysine	\$ 75.00
Arginine	\$ 120.00	Methionine	\$ 120.00
Aspartic Acid	\$ 120.00	Phenylalanine	\$ 120.00
Cystine	\$ 120.00	Proline	\$ 120.00
Glutamic Acid	\$ 120.00	Serine	\$ 120.00
Glycine	\$ 120.00	Threonine	\$ 120.00
Histidine	\$ 120.00	Tryptophan	\$ 150.00
Isoleucine	\$ 120.00	Tyrosine	\$ 120.00
Leucine	\$ 120.00	Valine	\$ 120.00

Feed & Forage Mycotoxin Tests (3 day turn-around)

<u>Mycotoxin</u>	<u>Method</u>	<u>MDL</u>	<u>1 - 2</u>	<u>3 - 5</u>	<u>6 - 9</u>	<u>10 +</u>
Aflatoxin (A)	ELISA	1.7 ppb	\$ 26.00	\$ 23.00	\$ 21.00	\$ 20.00
Citrinin (C)	ELISA	15.0 ppb	\$ 34.00	\$ 29.00	\$ 26.00	\$ 25.00
Fumonisin (F)	ELISA	0.1 ppm	\$ 34.00	\$ 29.00	\$ 26.00	\$ 25.00
Ochratoxin A (O)	ELISA	5.0 ppb	\$ 34.00	\$ 29.00	\$ 26.00	\$ 25.00
T-2 Toxin (T2)	ELISA	50.0 ppb	\$ 34.00	\$ 29.00	\$ 26.00	\$ 25.00
Vomitoxin, DON (V)	ELISA	0.2 ppm	\$ 34.00	\$ 29.00	\$ 26.00	\$ 25.00
Zearalenone (Z)	ELISA	50.0 ppb	\$ 34.00	\$ 29.00	\$ 26.00	\$ 25.00
A, T2, V, Z Screen	ELISA	See Above	\$ 119.00	\$ 105.00	\$ 93.00	\$ 89.00

Feed & Forage Mycotoxin Tests (5 to 7 day turn-around)

<u>Mycotoxin</u>	<u>Method</u>	<u>MDL</u>	<u>1 - 2</u>	<u>3 - 5</u>	<u>6 - 9</u>	<u>10 +</u>
Aflatoxin B ₁ G ₁ B ₂ G ₁	HPLC	4.0 ppb	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
Aflatoxin M ₁	HPLC	1.0 ppb	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
Citrinin (C)	HPLC	15.0 ppb	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
Fumonisin B ₁ B ₂ B ₃	HPLC	0.1 ppm	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
Ochratoxin A (O)	HPLC	5.0 ppb	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
T-2 Toxin (T2)	HPLC	100.0 ppb	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
Vomitoxin, DON (V)	HPLC	0.1 ppm	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
Zearalenone (Z)	HPLC	100.0 ppb	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
A, T2, V, Z Screen	HPLC	See above	\$ 350.00	\$ 308.00	\$ 275.00	\$ 264.00

<u>Mycotoxin</u>	<u>Method</u>	<u>MDL</u>	<u>1 - 2</u>	<u>3 - 5</u>	<u>6 - 9</u>	<u>10 +</u>
Aflatoxin B ₁ G ₁ B ₂ G ₁	TLC	20.0 ppb	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
Citrinin (C)	TLC	100.0 ppb	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
Fumonisin B ₁ B ₂ B ₃	TLC	0.1 ppm	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
Ochratoxin A (O)	TLC	1.0 ppb	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
T-2 Toxin (T2)	TLC	500.0 ppb	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
Vomitoxin, DON (V)	TLC	0.5 ppm	\$ 95.00	\$ 86.00	\$ 77.00	\$ 75.00
Zearalenone (Z)	TLC	500.0 ppb	\$ 110.00	\$ 99.00	\$ 90.00	\$ 85.00
A, T2, V, Z Screen	TLC	See above	\$ 150.00	\$ 132.00	\$ 118.00	\$ 113.00

Feed & Forage Micro-Biology Tests

Clostridium perfringens, qualitative	\$ 30.00	Endophyte, Lolitrem B	\$ 75.00
Clostridium perfringens, quantitative	\$ 100.00	Gossypol in Cottonseed	\$ 120.00
Coliform bacteria, qualitative	\$ 20.00	Listeria, qualitative	\$ 30.00
Coliform bacteria, quantitative	\$ 30.00	Listeria, quantitative	\$ 50.00
E.Coli, qualitative	\$ 30.00	Plate Count, Total	\$ 50.00
E.Coli, quantitative	\$ 50.00	Salmonella, qualitative	\$ 45.00
Endophyte, Ergovaline	\$ 75.00	Salmonella, quantitative	\$ 90.00

Fat & Oil Tests

MIU:	Moisture by Distillation, Insoluble Impurities, & Unsaponifiable Matter.	\$ 100.00	
Antioxidant Profile:	BHA,BHT, TBHQ, Propyl Gallate	\$ 250.00	
Active Oxygen Method (A.O.M. Stability)	\$ 70.00	Moisture by Distillation	\$ 50.00
Butylated Hydroxyanisole (BHA)	\$ 150.00	Mono, Di, & Triglycerides	\$ 200.00
Butylated Hydroxytoluene (BHT)	\$ 150.00	Neutral Oil Loss (NOL)	\$ 100.00
Fatty Acid Profile (Includes EE Fat)	\$ 150.00	Omega Fatty Acid	\$ 200.00
Free Fatty Acids	\$ 50.00	Peroxide Value	\$ 50.00
Glycerol / Glycerine	\$ 100.00	Saponification Value	\$ 80.00
Hydroxyl Value	\$ 90.00	Tert-Butylhydroquinone (TBHQ)	\$ 150.00
Insoluble Impurities	\$ 50.00	Thiobarbituric Acid Value (TBA)	\$ 150.00
Iodine Value	\$ 80.00	Total Fatty Acids (TFA)	\$ 85.00
Linoleic Acid	\$ 170.00	Trans Fatty Acids	\$ 200.00
Methanol	\$ 250.00	Unsaponifiable Matter	\$ 50.00

Drug Testing

Animal Health Product Tests

Amprolium	\$ 150.00	Oxytetracycline (OTC)	\$ 140.00
Apramycin	\$ 220.00	Penicillin	\$ 140.00
Bacitracin (BMD)	\$ 170.00	Phytase	\$ 140.00
Bamermycin	\$ 280.00	Pyrantel Tartrate (Continuex)	\$ 170.00
Carbadox	\$ 170.00	Ractopamine (Paylean)	\$ 160.00
Chlortetracycline (CTC)	\$ 150.00	Robenidine	\$ 170.00
Coban (Monensin, Rumensin)	\$ 140.00	Rumensin (Coban, Monensin)	\$ 140.00
Decoquinatate (Deccox)	\$ 250.00	Salinomycin	\$ 180.00
Fenbendazole (Panacur)	\$ 110.00	Semduramicin	\$ 210.00
Flavomycin	\$ 280.00	Stenorol (Halofuginone)	\$ 220.00
Laidlomycin	\$ 440.00	Streptomycin	\$ 170.00
Lasalocid (BovaTech)	\$ 360.00	Sulfa Residue	\$ 200.00
Lincomycin	\$ ASK	Sulfadimethoxine	\$ ASK
Monensin (Coban, Rumensin)	\$ 140.00	Sulfamethazine	\$ 176.00
Neomycin	\$ 190.00	Sulfathiazole	\$ 160.00
Nicarbazin	\$ 150.00	Tilmicosin	\$ 260.00
3-Nitro-4-Hydroxyphenylarsonic Acid	\$ 120.00	Tylosin (Tylan)	\$ 150.00
Ormetoprim	\$ ASK	Virginiamycin	\$ 170.00

* * * At least 150 grams of dry matter is required and must be submitted with an estimated detection level.

Agronomic Testing Services

Soil & Greenhouse Media Test Packages

		<u>1 - 5</u>	<u>6 - 10</u>	<u>11 +</u>	<u>Dealer</u>
S1:	pH, buffer pH, P, K, Ca, Mg, Na, S, CEC, % Base & Fertility Rx	\$ 12.00	\$ 9.00	\$ 8.00	\$ 7.00
S2:	Test S1 <i>plus</i> % Organic Matter	\$ 14.00	\$ 11.00	\$ 10.00	\$ 9.00
S3:	Test S1 <i>plus</i> % Organic Matter, B, Mn & Zn	\$ 17.00	\$ 15.00	\$ 14.00	\$ 12.00
S4:	Test S1 <i>plus</i> % Organic Matter, B, Mn, Zn, Cu, & Fe	\$ 18.00	\$ 16.00	\$ 15.00	\$ 14.00
PSNT:	Pre-Sidedress Soil Nitrate Level & Rx for Nitrogen credit	\$ 12.00	\$ 10.00	\$ 9.00	\$ 8.00
AvailableN:	Total Available Nitrogen, includes NO ₃ & NH ₄	\$ 20.00	\$ 19.00	\$ 18.00	\$ 17.00
SatPaste:	pH, Soluble Salts, NO ₃ -N, P, K, Ca, Mg, Na, Cl, Cu, Fe, Mn, & Zn	\$ 40.00	\$ 35.00	\$ 32.00	\$ 30.00

Manure Test Packages

M1:	Moisture, Total N, NH ₄ -N, P ₂ O ₅ , & K ₂ O	\$ 30.00
M2:	Moisture, Total N, NH ₄ -N, P ₂ O ₅ , K ₂ O, Ca, Mg, Na, & Nutrient Dollar Value Calculation (Using prevailing N-P-K Fertilizer Costs)	\$ 40.00
M3:	Moisture, Total N, NH ₄ -N, P ₂ O ₅ , & K ₂ O, Ca, Mg, Na, Nutrient Dollar Value Calculation (Using prevailing N-P-K Fertilizer Costs), Cu, Fe, Mn, & Zn	\$ 50.00

Plant Tissue Test Packages

T1:	N, P, K, Ca & Mg, Cu, Fe, Mn, & Zn	\$ 20.00
T2:	N, P, K, Ca, Mg, S, B, Cu, Fe, Mn & Zn	\$ 35.00

Water Test Packages

W1:	pH, Alkalinity, EC, NO ₃ -N, P, K, Ca, Mg, SO ₄ -S, B, Cu, Fe, Mn, Zn, Cl, & Na (Greenhouse Water)	\$ 65.00
W2:	pH, Hardness, Salt Concentration, NO ₃ -N, P, K, Ca, Mg, SO ₄ -S, Cl, Na, CO ₃ , HCO ₃ , B, Cu, Fe, Mn, Zn & Al (Livestock Water)	\$ 65.00
W3:	NO ₃ -N, P, K, Ca, Mg, SO ₄ -S, Cl, Na, B, Cu, Fe, Mn, Zn, Al, pH, EC, Hardness, CO ₃ , HCO ₃ , Salt Concentration & SAR (Irrigation Water)	\$ 65.00

Fertilizer & Lime Test Packages

DF1:	Total N, Available P ₂ O ₅ , Soluble K ₂ O (Dry Fertilizer)	\$ 60.00
DF2:	Total N, Available P ₂ O ₅ , Soluble K ₂ O, Ca, Mg, S, Cu, Fe, Mn, Zn & Na (Dry Fertilizer)	\$ 120.00
LF1:	Total N, pH & Specific Gravity (Liquid Fertilizer)	\$ 25.00
LF2:	Total N, Available P ₂ O ₅ , Ortho P ₂ O ₅ , Poly P ₂ O ₅ , pH and Specific Gravity (Liquid Fertilizer)	\$ 42.00
LF3:	Total N, Available P ₂ O ₅ , Soluble K ₂ O, pH & Specific Gravity (Liquid Fertilizer)	\$ 50.00
LF4:	Ammonical N, Nitrate N, Total N, Available P ₂ O ₅ , Soluble K ₂ O, pH, Specific Gravity, Conductivity, Ca, Mg, S, Co, Cu, Fe, Mn, Mo, Zn, Al & Na (Liquid Fertilizer)	\$ 90.00
L1:	Particle Size Distribution: 8, 20, 60, 100 mesh sieves (Lime)	\$ 20.00
L2:	Moisture, Ca & Mg (Lime)	\$ 26.00
L3:	Moisture, Ca, Mg & NV (Lime)	\$ 42.00
L4:	Moisture, Ca, Mg, NV, ECCE & Particle Size Distribution (Lime)	\$ 60.00

Additional Agronomic Test Procedures

(May be requested w/ S1 – S2, SME, M1 – M2, T1 – T2, W1 – W3, DF1 - DF2, LF1 - LF4, or L1 - L4)

	<u>Soil</u>	<u>Manure</u>	<u>Plant Tissue</u>	<u>Water</u>	<u>Fert. & Lime</u>
Aluminum (Al)	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 10.00 *
Bicarbonate (HCO ₃)	\$ 10.00	-----	\$ 15.00	\$ 15.00	\$ 15.00
BioChemical Oxygen Demand (BOD)	-----	-----	-----	\$ 46.00	-----
Boron (B)	\$ 6.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 17.00 *
Bulk Density (lbs / ft ³)	\$ 15.00	-----	-----	-----	\$ 18.00
Calcium (Ca)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 12.00 *
Calcium Carbonate Equivalent (CCE)	\$ 12.00	\$ 16.00	-----	-----	\$ 16.00
Carbon (C)	\$ 10.00	\$ 10.00	\$ 10.00	-----	\$ 15.00
Carbon : Nitrogen Ratio	\$ 25.00	\$ 25.00	\$ 25.00	-----	\$ 25.00
Carbonate (CO ₃)	-----	-----	-----	\$ 15.00	-----
Chemical Oxygen Demand (COD)	-----	-----	-----	\$ 46.00	-----
Chloride (Cl)	\$ 6.00	\$ 10.00	\$ 10.00	\$ 10.00	\$ 19.00
Cobalt (Co)	\$ 10.00	\$ 30.00	\$ 30.00	-----	\$ 30.00
Conductivity / Soluble Salts (EC)	\$ 10.00	\$ 10.00	-----	\$ 10.00	\$ 10.00
Copper (Cu)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 12.00 *
Dissolved Oxygen (DO)	-----	-----	-----	\$ 25.00	-----
Fluoride (F)	-----	\$ 15.00	\$ 15.00	\$ 15.00	\$ 25.00
Formeldehyde	-----	-----	-----	-----	\$ 50.00
Free Acid	-----	-----	-----	-----	\$ 50.00
Iron (Fe)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 12.00 *
Magnesium (Mg)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 12.00 *
Manganese (Mn)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 12.00 *
Moisture, Oven (DM)	\$ 6.00	\$ 6.00	\$ 6.00	-----	\$ 6.00
Molybdenum (Mo)	\$ 20.00	\$ 20.00	\$ 20.00	\$ 20.00	\$ 24.00
Nitrogen-Ammonium (NH ₄ ⁺)	\$ 10.00	\$ 12.00	\$ 15.00	\$ 15.00	\$ 15.00
Nitrogen-Nitrate (NO ₃ ⁻)	\$ 10.00	\$ 15.00	\$ 12.00	\$ 15.00	\$ 15.00
Nitrogen-Nitrite (NO ₂)	-----	\$ 12.00	\$ 12.00	\$ 15.00	\$ 15.00
Nitrogen-Slow Release (N)	-----	-----	-----	-----	\$ 40.00
Nitrogen-Total (N)	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00	\$ 15.00
Nitrogen-Water Insoluble (N)	-----	\$ 18.00	-----	-----	\$ 18.00
Nitrogen-Water Soluble (N)	-----	\$ 18.00	-----	-----	\$ 18.00
Oil & Grease	-----	-----	-----	\$ 50.00	-----
Organic Matter	\$ 6.00	\$ 10.00	-----	-----	-----
Particle Size (% sand, silt, clay)	\$ 15.00	-----	-----	-----	-----
Particle Size (each screen)	\$ 10.00	\$ 20.00	-----	-----	\$ 10.00
pH	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00	\$ 6.00
Phosphate (P ₂ O ₅)	-----	\$ 10.00	-----	-----	\$ 13.00
Phosphate-Ortho & Poly (P ₂ O ₅)	-----	-----	-----	-----	\$ 20.00
Phosphorus (P)	\$ 6.00	-----	\$ 6.00	\$ 6.00	\$ 10.00
Potassium (K)	\$ 6.00	-----	\$ 6.00	\$ 6.00	\$ 10.00
Potassium Oxide (K ₂ O)	-----	\$ 10.00	-----	-----	\$ 18.00
Salt Index	-----	-----	-----	-----	\$ 15.00
Selenium (Se)	\$ 38.00	\$ 38.00	\$ 38.00	\$ 38.00	\$ 38.00
Size Guide Number (SGN)	-----	-----	-----	-----	\$ 50.00
Specific Gravity	-----	\$ 10.00	-----	\$ 10.00	\$ 10.00
Sodium (Na)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 18.00
Sulfur (S)	\$ 6.00	\$ 10.00	\$ 8.00	\$ 10.00	\$ 15.00 *
Sulfur, Sulfate (SO ₄ -S)	\$ 10.00	\$ 20.00	\$ 12.00	\$ 10.00	\$ 30.00
Tl Dissolved Solids / Salt Conc. (TDS)	-----	-----	-----	\$ 15.00	-----
Total Organic Carbon (TOC)	-----	-----	-----	\$ 50.00	-----
Total Solids	-----	-----	-----	\$ 15.00	-----
Total Suspended Solids	-----	-----	-----	\$ 15.00	-----
Total Volatile Solids (TVS)	-----	\$ 28.00	-----	\$ 28.00	-----
Zinc (Zn)	\$ 6.00	\$ 10.00	\$ 6.00	\$ 10.00	\$ 12.00 *

* The Cost is \$32.00 per element if concentration exceeds 5.0%.

Environmental Testing Services

Heavy Metal Scans

ICP Scan # 1, Not for Low Detection Level - Aluminum, Beryllium, Boron, Calcium, Cobalt, Copper, Iron, Magnesium, Manganese, Molybdenum, Phosphorus, Potassium, Sodium, Sulfur, & Zinc.	\$ 225.00
ICP Scan # 2, Not for Low Detection Level - Arsenic, Barium, Cadmium, Chromium, Lead, Nickel, & Selenium.	\$ 110.00
ICP Scan # 3, Not for Low Detection Level - Cadmium, Chromium, Copper, Lead, Nickel, Silver, & Zinc.	\$ 120.00
GF / AA Scan # 4, For Low Detection Level - Barium, Cadmium, Chromium, Lead, & Nickel	\$ 140.00
GF / AA Scan # 5, For Low Detection Level - Arsenic, Barium, Cadmium, Chromium, Lead, Nickel, & Selenium.	\$ 225.00
GF / AA Scan # 6, For Low Detection Level - Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, & Selenium.	\$ 285.00
CFR Part 503 Metals, Not for Low Detection Level - Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc.	\$ 250.00
MCL (IOC) Package, For Low Detection Level - Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Fluoride, Mercury, Nickel, Selenium, & Thallium	\$ 390.00

GF / AA & ICP Metals

	<u>GF / AA</u>	<u>ICP</u>		<u>GF / AA</u>	<u>ICP</u>
Aluminum (Al)	-----	\$ 24.00	Mercury (Hg)	\$ 70.00	-----
Antimony (Sb)	\$ 34.00	\$ 24.00	Molybdenum (Mo)	-----	\$ 24.00
Arsenic (As)	\$ 60.00	\$ 24.00	Nickel (Ni)	\$ 34.00	\$ 24.00
Barium (Ba)	\$ 34.00	\$ 24.00	Phosphate (PO4)	-----	\$ 24.00
Beryllium (Be)	\$ 34.00	\$ 24.00	Phosphate-Ortho as P	-----	\$ 30.00
Boron (B)	-----	\$ 24.00	Phosphorus-Dissolved (P)	-----	\$ 30.00
Cadmium (Cd)	\$ 34.00	\$ 24.00	Phosphorus-Total (P)	-----	\$ 24.00
Calcium (Ca)	-----	\$ 24.00	Potassium (K)	-----	\$ 24.00
Chromium (Cr)	\$ 34.00	\$ 24.00	Selenium (Se)	\$ 60.00	\$ 24.00
Chromium, Hexavalent	\$ 40.00	-----	Silica (SiO ₂)	\$ 30.00	-----
Cobalt (Co)	-----	\$ 24.00	Silicon (Si)	\$ 60.00	-----
Copper (Cu)	\$ 34.00	\$ 24.00	Silver (Ag)	\$ 34.00	-----
Iron (Fe)	-----	\$ 24.00	Sodium (Na)	-----	\$ 24.00
Iron-Soluble (Fe)	-----	\$ 34.00	Strontium (Sr)	\$ 24.00	-----
Lead (Pb)	\$ 34.00	\$ 34.00	Sulfur-Total (S)	-----	\$ 24.00
Lead & Copper Rule	-----	\$ 60.00	Thallium (Tl)	\$ 34.00	\$ 24.00
Lead-Soluble (Pb)	-----	\$ 34.00	Tin (Sn)	\$ 24.00	-----
Magnesium (Mg)	-----	\$ 24.00	Titanium (Ti)	\$ 24.00	-----
Magnesium-Soluble (Mg)	-----	\$ 30.00	Vanadium (V)	-----	\$ 24.00
Manganese (Mn)	\$ 34.00	\$ 24.00	Zinc (Zn)	-----	\$ 24.00
Manganese-Soluble (Mn)	-----	\$ 30.00	Zinc-Soluble (Zn)	-----	\$ 24.00

Environmental Testing

Volatiles

DRINKING WATER VOLATILES (Method 524.2) \$ 250.00

Regulated VOC's: Benzene, Carbon Tetrachloride, o-Dichlorobenzene, p-Dichlorobenzene, 1,2-Dichloroethane, cis-1,2 Dichloroethylene, 1,1-Dichloroethylene, trans-1,2-Dichloroethylene, Dichloromethane, 1,2-Dichloropropane, Ethylbenzene, Monochlorobenzene, Styrene, Tetrachloroethylene, Toluene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, and Xylenes (total).

Unregulated VOC's: Bromobenzene, Bromodichloromethane, Bromoform, Bromomethane, Chlorodibromomethane, Chloroethane, Chloroform, Chloromethane, o-Chlorotoluene, p-Chlorotoluene, Dibromomethane, m-Dichlorobenzene, 1,1-Dichloroethane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,3-Dichloropropene, 1,1-Dichloropropene, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane.

Discretionary VOC's: Bromochloromethane, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Dichlorodifluoromethane, Hexachlorobutadiene, Isopropylbenzene, p-Isopropyl toluene, Naphthalene, n-Propylbenzene, 1,2,3-Trichlorobenzene, Trichlorofluoromethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Trichlorofluoromethane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, MTBE.

EPA 508A - Polychlorinated Biphenyls (PCB's) - Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, & Arochlor 1260. Water: \$ 120.00

EPA 1613 - 2,3,4,8-TCDD (Dioxin) Water: \$ 600.00

EPA 8240 Groundwater Volatiles - Soil or Water: \$ 500.00

Acetone, Acrolein, Acrylonitrile, Benzene, Bromodichloromethane, Bromoform, Bromomethane, 2-Butanone, Carbon Disulfide, Carbon Tetrachloride, Chlorobenzene, Chlorodibromomethane, Chloroethane, 2-Chloroethyl Vinyl Ether, Chloroform, Chloromethane, Dibromomethane, 1,4-Dichlorobutene (total), Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, 1,2-Dichloroethene (total), 1,2-Dichloropropane, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Ethanol, Ethylbenzene, Ethyl Methacrylate, 2-Hexanone, Idomethane, Methylene Chloride, 4-Methyl-2-Pentanone, Styrene, 1,1,2,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, Vinyl Acetate, Vinyl Chloride, and Xylenes (total).

EPA Method 624 - Soil or Water: \$ 350.00

Benzene, Bromobenzene, Bromochloromethane, Bromoform, Bromodichloromethane, Bromomethane, n-Butylbenzene, sec-Butylbenzene, tert-Butylbenzene, Carbon Tetrachloride, Chlorobenzene, Chlorodibromomethane, Chloroethane, Chloroform, Chloromethane, 2-Chlorotoluene, 4-Chlorotoluene, 1,2-Dibromo-3-Chloropropane, 1,2-Dichlorobenzene, 1,4-Dichlorobenzene, Dichlorodifluoromethane, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethene, cis-1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 1,1-Dichloropropene, cis-1,3-Dichloropropene, trans-1,3-Dichloropropene, Ethylbenzene, Hexachlorobutadiene, Isopropylbenzene, p-Isopropyltoluene, Methylene Chloride, Naphthalene, n-Propylbenzene, Styrene, 1,1,2,2-Tetrachloroethane, 1,1,1,2-Tetrachloroethane, Tetrachloroethene, Toluene, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethene, Trichlorofluoromethane, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Vinyl Chloride, o-Xylene, m-Xylene, and p-Xylene.

Base / Neutral / Acid / Extractable Semi-Volatiles (EPA Method 625 & 8270) - \$ 800.00

1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,2-Diphenylhydrazine, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 2,4,6-Trichlorophenol, 2,4-Dichlorophenol, 2,4-Dimethylphenol, 2,4-Dinitrophenol, 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, 2-Chloronaphthalene, 2-Chlorophenol, 2-Nitrophenol, 3,3-Dichlorobenzidine, 4,6-Dinitro-o-cresol, 2-Methyl-4,6-Dinitrophenol, Naphthalene, Nitrobenzene, 4-Bromophenyl Phenyl Ether, 4-Chloro-3-Methyl Phenol, 4-Chlorophenyl Phenyl Ether, 4-Nitrophenol, Acenaphthene, Acenaphthylene, Anthracene, Benzidine, Benzo (a) Anthracene, Benzo (a) Pyrene, Benzo (ghi) Perylene, Benzo (k) Fluoranthene, Bis (2-Chloroethoxy) Methane, Bis (2-Chloroethyl) ether, Bis (2-Chloroisopropyl) Ether, Bis (2-Ethylhexyl) Phthalate, Butyl Benzyl Phthalate, Chrysene, Dibenzo (a,h) Anthracene, Diethyl Phthalate, Dimethyl Phthalate, Di-N-Butyl Phthalate, Di-N-Octyl Phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachlorocyclopentadiene, Hexachloroethane, Ideno (1,2,3-ch) Pyrene, Isophorone, N-Nitrosodimethylamine, N-Nitrosodi-N-Propylamine, N-Nitrosodiphenylamine, Pentachlorophenol, Phenanthrene, Phenol, and Pyrene.

Polynuclear Aromatic Hydrocarbon Semi-Volatiles (Methods EPA 610, 8100, 8270, & 8310) \$ 360.00

Acenaphthylene, Anthracene, Benzo (a) Anthracene, Benzo (a) Pyrene, Benzo (b) Fluoranthene, Benzo (ghi) Perylene, Benzo (k) Fluoranthene, Chrysene, Dibenzo (a,h) Anthracene, Fluoranthene, Fluorene, Indeno (1,2,3-cd), Naphthalene, Phenanthrene, & Pyrene.

Total Toxic Organics (TTO) (Methods EPA 624, 625, & 608) \$ 1500.00

Environmental Testing

Various Environmental Tests

Alkalinity, Stability	\$ 44.00	Nitrogen, Total Kjeldahl (TKN)	\$ 40.00
Alkalinity, Total	\$ 28.00	Oil & Grease	\$ 80.00
Asbestos (Plm Bulk)	\$ 76.00	Organic Matter (OM)	\$ 30.00
Ash	\$ 50.00	Paint Filter Test	\$ 32.00
BOD (BioChemical Oxygen Demand)	\$ 46.00	PCB's, Total	\$ 120.00
BOD Soluble	\$ 46.00	pH	\$ 28.00
BTEX	\$ 120.00	Phenolics, Total	\$ 60.00
BTU	\$ 100.00	Solids, Total	\$ 20.00
Carbonaceous BOD	\$ 46.00	Solids, Total Dissolved (TDS)	\$ 20.00
Carbonaceous BOD, Soluble	\$ 46.00	Solids, Total Suspended (TSS)	\$ 20.00
Chloride	\$ 24.00	Solids, Total Volatile (TVS)	\$ 28.00
Chloride, Total Residual	\$ 22.00	Specific Gravity	\$ 40.00
COD (Chemical Oxygen Demand)	\$ 46.00	Sulfate (SO ₄)	\$ 40.00
Conductivity	\$ 18.00	Sulfide	\$ 50.00
Cyanide (HCN), Free	\$ 60.00	Sulfide, Reactive	\$ 60.00
Cyanide (HCN), Reactive	\$ 60.00	TCLP, Acid Compounds	\$ 280.00
Cyanide (HCN), Total	\$ 60.00	TCLP, Base Neutral Compounds	\$ 280.00
Dissolved Oxygen (DO)	\$ 20.00	TCLP, Extraction Inorganic	\$ 140.00
EOX (Extractable Organic Halides)	\$ 180.00	TCLP, Extraction Organic	\$ 140.00
Flashpoint	\$ 70.00	TCLP, Extraction ZHE Volatile	\$ 140.00
Fluoride	\$ 40.00	TCLP, Herbicides	\$ 310.00
Halogens, Total	\$ 220.00	TCLP, Metals	\$ 280.00
Hardness	\$ 40.00	TCLP, Pesticides	\$ 310.00
Moisture	\$ 40.00	TCLP, Volatiles	\$ 290.00
Nitrogen, Ammonium (NH ₄ -N)	\$ 22.00	TCLP, Complete Package	\$ 1800.00
Nitrogen, Nitrate (NO ₃ -N)	\$ 28.00	TOC (Total Organic Carbon)	\$ 74.00
Nitrogen, Nitrite (NO ₂ -N)	\$ 28.00	2,3,7,8-TCDD (Dioxin)	\$ 800.00

Pesticide Testing

Chemical Name (Trade Name)	Cost	Chemical Name (Trade Name)	Cost
2,4,5-T (2,4,5-T)	\$ 180.00	Endosulfansulfate	\$ 160.00
2,4,5-TP (Silvex)	\$ 180.00	Endrin (Hexadrin)	\$ 160.00
2,4-D (2,4-D)	\$ 180.00	Endrin aldehyde	\$ 160.00
2,4-DB (Butyrac 200, Butoxone 200)	\$ 180.00	Endrin Ketone	\$ 160.00
2,6-Dichlorobenzonitrile	\$ 205.00	EPTC (Eptam)	\$ 205.00
4,4-DDD (4,4-DDD)	\$ 160.00	Ethalfuralin (Sonalan)	\$ 165.00
4,4-DDE (4,4-DDE)	\$ 160.00	Ethion (Ethion)	\$ 180.00
4,4-DDT (4,4-DDT)	\$ 160.00	Ethoprop (Ethoprop)	\$ 180.00
a-BHC	\$ 160.00	Ethoxyquin (Ethoxyquin)	\$ 180.00
Acetochlor (Harness, Surpass)	\$ 180.00	Ethylenedibromide (EDB)	\$ 120.00
Alachlor (Lasso)	\$ 170.00	Etridiazole (Etridiazole)	\$ 180.00
Aldicarb (Temik)	\$ 180.00	Fenoxaprop-Ethel (Acclaim)	\$ 205.00
Aldrin (Aldrin)	\$ 160.00	Fluchloralin (Basalin)	\$ 180.00
Ametryn (Evik)	\$ 180.00	Flumetsulam (Broadstrike)	\$ 225.00
Amitraz	\$ 250.00	Flumioxazin (Valor)	\$ 300.00
Atrazine (Aatrex)	\$ 160.00	Fluridone (Sonar)	\$ 180.00
Azinphos Methyl (Guthion)	\$ 160.00	Gesatamin (Atraton)	\$ 180.00
Benfluralin (Benefin, Balan, Balfin)	\$ 180.00	Glyphosate (Roundup)	\$ 195.00
Bensulide (Bromacil)	\$ 180.00	Halosulfuron-methyl (Permit)	\$ 225.00
Bentazon (Basagran)	\$ 180.00	Heptachlor (Heptachlor)	\$ 160.00
Bromacil (Bromacil)	\$ 180.00	Heptachlor Epoxide (Heptachlor metabolite)	\$ 160.00
Bromoxynil (Buctril)	\$ 260.00	Hexazinone (Velpar)	\$ 180.00
Butachlor (Butachlor)	\$ 180.00	Imazapyr (Arsenal)	\$ 180.00
Butylate (Sutan)	\$ 205.00	Imazaquin (Scepter)	\$ 180.00
Captan (Captan)	\$ 180.00	Imazethapyr (Pursuit)	\$ 180.00
Carbazole (Carbazole)	\$ 180.00	Iprodione (Chipco)	\$ 205.00
Carbofuran (Carbofuran)	\$ 180.00	Isopropalin (Paarlan)	\$ 180.00
Carbophenothion (Trithion)	\$ 180.00	Lindane (g-BHC)	\$ 160.00
Chlordane (Chlordane)	\$ 165.00	Linuron (Lorox)	\$ 180.00
Chlorimuron ethyl (Classic)	\$ 205.00	Malathion (Malathion)	\$ 180.00
Chlorobenzilate (Chlorobenzilate)	\$ 165.00	MCPA (MCPA)	\$ 180.00
Chloroneb (Terraneb)	\$ 165.00	MCPP (MCPP)	\$ 180.00
Chlorothalonil (Bravo, Daconil)	\$ 180.00	Metalaxyl (Apron, Ridomil)	\$ 180.00
Chlorpyrifos (Lorsban, Dursban)	\$ 180.00	Methoxychlor (Methoxychlor)	\$ 180.00
Clomazone (Command)	\$ 235.00	Methyl Parathion (PennCap-M)	\$ 180.00
Clopyralid (Stinger)	\$ 225.00	Metolachlor (Dual)	\$ 180.00
Cloransulam-methyl (FirstRate)	\$ 300.00	Metribuzin (Lexone, Sencor)	\$ 120.00
Cyanazine (Bladex)	\$ 165.00	Molinate (Molinate, Ordram)	\$ 180.00
Cycloate (Ro-Neet)	\$ 180.00	Monuron (Telvar)	\$ 180.00
Dalapon (Dalapon)	\$ 180.00	Oxadiazon (Ronstar)	\$ 180.00
d-BHC	\$ 160.00	Oxyfluorfen (Goal)	\$ 180.00
DCPA (Dacthal)	\$ 180.00	Oryzalin (Surflan)	\$ 205.00
DEF	\$ 180.00	Paraquat (Gramoxone)	\$ 260.00
Demeton (Systox)	\$ 180.00	Parathion (Parathion)	\$ 180.00
Dibromochloropropane (DBCP)	\$ 120.00	Pendimethalin (Prowl)	\$ 165.00
Dichloroprop (2,4-DP)	\$ 180.00	Pentachloronitrobenzene (PCNB)	\$ 180.00
Dicamba (Banvel)	\$ 180.00	cis-Permethrin	\$ 180.00
Diclotophos (GC/MS)	\$ 210.00	trans-Permethrin	\$ 180.00
Dieldrin (Dieldrin)	\$ 160.00	Phorate (Thimet)	\$ 180.00
Dimethoate (Dimethoate)	\$ 180.00	Propazine (Milogard)	\$ 180.00
Dinoseb (DNBP)	\$ 180.00	Prodiamine (Barricade)	\$ 180.00
Diquat (Diquat)	\$ 150.00	Profluralin (Tolban)	\$ 180.00
Disulfoton (Disulfoton)	\$ 180.00	Prometon (Pramitol)	\$ 180.00
Dithiocarbamates	\$ 180.00	Prometryn (Prometryn)	\$ 180.00
Dithiopyr (Dimension)	\$ 205.00	Propachlor (Propachlor)	\$ 180.00
Endothall (Endothall)	\$ 225.00	Propazine (Propazine)	\$ 180.00
Endosulfan I	\$ 160.00	Propiconazole (Banner)	\$ 205.00
Endosulfan II	\$ 160.00	Simetryn (Simetryn)	\$ 180.00

Pesticide Testing

<u>Chemical Name (Trade Name)</u>	<u>Cost</u>	<u>Chemical Name (Trade Name)</u>	<u>Cost</u>
Simazine (Princep)	\$ 180.00	Thiophanate Methyl (Topsin)	\$ 180.00
Sulfometuron Methyl (Oust)	\$ 180.00	Vernolate (Vernam)	\$ 180.00
Tebuthuiron (Spike)	\$ 120.00	Thiram (Thiram)	\$ 235.00
Terbacil (Sinbar)	\$ 180.00	Toxaphene (Toxaphene)	\$ 165.00
Terbuthylazine (Gardoprim)	\$ 180.00	Triadimefon (Bayleton)	\$ 205.00
Terbutryn (Terbutryn)	\$ 180.00	Trifluralin (Treflan)	\$ 165.00
Thifensulfuron-Methyl	\$ 205.00	Triclopyr (Crossbow, Garlon)	\$ 310.00

<u>Pesticide Pkg</u>	<u>Pesticides Included</u>	<u>Media</u>	<u>Cost (\$)</u>
EPA 504.1 List	Dibromochloropropane (DBCP), Ethylenedibromide (EDB)	Water	\$ 150.00
EPA 507 List	Alachlor, Atrazine, Metolachlor, Metribuzin, Simazine	Water	\$ 250.00
EPA 508 List	Aldrin, Chlordane, Dieldrin, Endrin, Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Toxaphene	Water	\$ 200.00
EPA 508A List	Polychlorinated Biphenyls (PCB)	Water	\$ 150.00
EPA 515.1 List	2,4-D, 2,4,5-TP, Acidfluorfen, Bentazon, DCPA, Dalapon, Dicamba, Dichloroprop, Dinoseb, Pentachlorophenol, Picloram	Water	\$ 300.00
EPA 525.2A List	Alachlor, Atrazine, Butachlor, Metolachlor, Metribuzin, Propachlor, Simazine	Water	\$ 250.00
EPA 525.2G List	Di (2-Ethylhexyl) Adipate, Di (2-Ethylhexyl) phthalate	Water	\$ 130.00
EPA 531.1 List	Aldicarb, Aldicarb Sulfone, Aldicarb Sulfoxide, Carbaryl Carbofuran, 3-Hydroxycarbofuran, Methomyl, Oxamyl (Vydate)	Water	\$ 390.00
EPA 547 List	Glyphosate	Water	\$ 195.00
EPA 548.1 List	Endothall	Water	\$ 225.00
EPA 549.1 List	Diquat	Water	\$ 150.00
EPA 550.1 List	Benzo (a) Pyrene	Water	\$ 400.00
EPA 1613 List	2,3,4,8-TCDD (Dioxin)	Water	\$ 800.00
EPA 8081 List	Aldrin, a-BHC, b-BHC, d-BHC, Lindane, DDD, DDE, DDT, Dieldrin, Endosulfan I, Endosulfan II Endosulfan Sulfate, Endrin, Endrin Aldehyde Endrin Ketone, Heptachlor, Heptachlor Epoxide, Methoxychlor, Toxaphene, PCB's - 1242, 1254, 1221, 1232, 1248, 1260, 1016, Chlordane	Water Soil	\$ 300.00 \$ 330.00
EPA 8141 List	Azinphos Methyl, Chlorpyrifos, Demeton, Diazinon, Disulfoton, Ethoprop, Malathion, Parathion Methyl, Phorate	Water Soil	\$ 375.00 \$ 425.00
Neutral Extractables	Alachlor, Ametryn, Atrazine, Benfluralin, Butachlor, Butylate, Chlorpyrifos, Cyanazine, EPTC, Ethafluralin, Metolachlor, Metribuzin, Pendimethaline, Phorate, Prometon, Prometryn, Propachlor, Propazine, Simazine, Trifluralin	Water Soil	\$ 300.00 \$ 300.00
Acid Extractables	2,4-D, 2,4-DB, 2,4-DP, 2,4,5-T, 2,4,5-TP, Dicamba, Bentazon, Dalapon, Dacthal, MCPA, MCPP, Pentachlorophenol, Picloram, Triclopyr	Water Soil	\$ 270.00 \$ 280.00
Trizines	Ametryn, Atrazine, Atraton, Cyanazine, Metribuzin, Prometon, Prometryn, Propazine, Simazine, Simetryn, Terbuthylazine, Terbutryn	Water Soil	\$ 205.00 \$ 250.00
Trinzines Plus	Alachlor, Ametryn, Atrazine, Atraton, Bromacil, Butylate, Cyanazine, Metholachlor, Metribuzin, Prometon, Prometryn, Propachlor, Propazine, Simazine, Simetryn, Terbuthylazine, Terbutryn, Trifluralin	Water Soil	\$ 285.00 \$ 300.00
Herbicide Short Scan	Alachlor, Bromacil, Butachlor, Butylate, Dachal, Dithiopyr, EPTC, Hexazinone, Metolachlor, Metribuzin, Oxadiazon, Propachlor, Propanil, Terbacil, Vernolate	Water Soil	\$ 250.00 \$ 285.00
Acid Herbicides	Bentazon, DCPA, Dicamba, MCPA, MCPP, Picloram, Triclopyr, 2,4-D, 2,4-DB, 2,4-DP	Water Soils	\$ 310.00 \$ 330.00
DNA Herbicides	Benfluralin, Ethafluralin, Pendamethalin, Prodiamine, Trifluralin	Water Soil	\$ 205.00 \$ 250.00

Pesticide Testing

<u>Pesticide Pkg</u>	<u>Pesticides Included</u>	<u>Media</u>	<u>Cost (\$)</u>
Herbicide Screen #1	Imazapyr, Imazaquin, Imazethapyr	Water Soil	\$ 205.00 \$ 250.00
Full Herbicide Screen	Alachlor, Ametryn, Atraton, Atrazine, Benfluralin, Bromacil, Butylate, Cyanazine, Butachlor, DCPA, Propanil, Dichlobonil, Dithiopyr, EPTC, Hexazinone, Ethalfluralin, Linuron, Metolachlor, Metribuzin, Oxadiazon, Prometon, Prometryn, Propachlor, Propazine, Propyzamide (Kerb), Pendimethalin, Simazine, Simetryn, Terbacil, Terbutylazine, Terbutryn, Trifluralin, Vernolate.	Water Soil	\$ 330.00 \$ 375.00
Full Insecticide Screen	Aldrin, a-BHC, b-BHC, d-BHC, g-BHC, Chlordane, Chlorpyrifos, Demeton, 4,4-DDD, 4,4-DDE, 4,4-DDT, Diazinon, Dieldrin, Disulfoton, Endosulfan I, Endosulfan II, Endosulfan Sulfate, Endrin, Endrin Aldehyde, Ethion, Ethoprop, Ethyl Parathion, Fenamiphos (Nemacur), Guthion, Heptachlor, Heptachlor Epoxide, Kepone, Malathion, Methoxychlor, Methyl Paration, Mirex, cis-Permethrin, trans-Permethrin, Phorate	Water Soil	\$ 330.00 \$ 375.00
Full Fungicide Screen	Banner, Captan, Chloroneb (Terraneb), Chlorothalonil, Flutolanil, Hexachlorobenzene, Methalaxyl, Pentachloronitrobenzene, Propiconazole, Rubigan, Vinclozolin (Uralan)	Water Soil	\$ 165.00 \$ 205.00
Any 2 Full Screens		Water Soil	\$ 475.00 \$ 500.00
All 3 Full Screens		Water Soil	\$ 550.00 \$ 575.00

Litchfield Analytical Services
535 Marshall Street
P.O. Box 457
Litchfield, MI 49252
email: litchlab@qcnet.net
web: www.litchlab.com

