



American Association for Laboratory Accreditation

# *Accredited DoD ELAP Laboratory*

A2LA has accredited

## **RTI LABORATORIES, INC.**

*Livonia, MI*

for technical competence in the field of

### **Environmental Testing**

In recognition of the successful completion of the A2LA evaluation process that includes an assessment of the laboratory's compliance with ISO/IEC 17025:2005, the 2009 TNI Standard, and the requirements of the Department of Defense Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.0 of the DoD Quality System Manual for Environmental Laboratories (QSM); accreditation is granted to this laboratory to perform recognized EPA methods as defined on the associated A2LA Environmental Scope of Accreditation. This accreditation demonstrates technical competence for this defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009).



Presented this 13<sup>th</sup> day of November 2014.



President & CEO  
For the Accreditation Council  
Certificate Number 0570.03  
Valid to October 31, 2016

*For the tests to which this accreditation applies, please refer to the laboratory's Environmental Scope of Accreditation.*



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RTI LABORATORIES, INC.  
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ENVIRONMENTAL

Valid To: October 31, 2016

Certificate Number: 0570.03

In recognition of the successful completion of the A2LA evaluation process, (including an assessment of the laboratory's compliance with ISO IEC 17025:2005, the 2009 TNI Standard, and the requirements of the DoD Environmental Laboratory Accreditation Program (DoD ELAP) as detailed in version 5.0 of the DoD Quality Systems Manual for Environmental Laboratories) accreditation is granted to this laboratory to perform recognized EPA methods using the following testing technologies and in the analyte categories identified below:

Testing Technologies


ICP/MS, Gas Chromatography, Gas Chromatography/Mass Spectrometry, Gravimetry, High Performance Liquid Chromatography, Ion Chromatography, Methylene Blue Active Substances, Misc.- Electronic Probes (pH, O<sub>2</sub>), Oxygen Demand, Hazardous Waste Characteristics Tests, Spectrophotometry (Visible), Spectrophotometry (Automated), Titrimetry, Total Organic Carbon, Turbidity

Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
<u>Metals</u>				
Aluminum	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Antimony	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Arsenic	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Barium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Beryllium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Boron	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Cadmium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Calcium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Chromium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Cobalt	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Copper	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Iron	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Lead	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Magnesium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Manganese	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C

Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
Mercury	EPA 245.1	EPA 245.1/1631E	EPA 7470A	EPA 7471B
Molybdenum	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Nickel	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Potassium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Selenium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Silicon	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Silver	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Sodium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Thallium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Tin	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Titanium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Uranium	EPA 200.8	EPA 200.8	EPA 6020A	EPA 6020A
Vanadium	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
Zinc	EPA 200.8	EPA 200.7/200.8	EPA 6020A/6010C	EPA 6020A/6010C
<u>Nutrients</u>				
Ammonia (as N)	SM4500 NH <sub>3</sub> -D	SM4500 NH <sub>3</sub> -D	-----	-----
Kjeldahl Nitrogen	EPA 351.2	EPA 351.2	-----	-----
Nitrate (as N)	EPA 300.0	EPA 300.0/9056	EPA 9056	EPA 9056
Nitrate-nitrite	EPA 300.0	EPA 300.0/9056	EPA 9056	EPA 9056
Nitrite (as N)	EPA 300.0	EPA 300.0/9056	EPA 9056	EPA 9056
Orthophosphate (as P)	SM4500 P F	EPA 9056 SM4500 P-F	EPA 9056	EPA 9056
Total Phosphorus	SM4500 P-F	SM4500 P-F	-----	-----
<u>Demands</u>				
Biochemical Oxygen Demand	SM5210 B	SM5210 B	-----	-----
Carbonaceous BOD	SM5210 B	SM5210 B	-----	-----
Chemical Oxygen Demand	EPA 410.4	EPA 410.4	-----	-----
Total Organic Carbon	SM5310 B	SM5310 B	EPA 9060	EPA 9060
<u>Wet Chemistry</u>				
Alkalinity (as CaCO <sub>3</sub> )	SM2320 B	SM 2320B	-----	-----
Chloride	EPA 300.0	EPA 300.0/9056	EPA 9056	EPA 9056
Cyanide	SM4500 CN-E	SM4500 CN-E EPA 9012B	EPA 9012B	EPA 9012B
Available Cyanide	ASTM D6888-04	ASTM D6888-04	-----	-----
Fluoride	EPA 300.0	EPA 300.0/9056	EPA 9056	EPA 9056
Hardness	SM 2340B	SM 2340B	-----	-----
Hexavalent Chromium	-----	SM 3500 Cr-B	EPA 7196A	EPA 7196A/3060A
pH	SM4500-H <sup>+</sup> B	SM4500-H <sup>+</sup> B	EPA 9040C/9041A	EPA 9045C
Perchlorate	-----	EPA 6850	EPA 6850	EPA 6850
Oil and Grease	EPA 1664A	EPA 1664A	EPA 9071B	EPA 9071B
Phenols	EPA 420.1	EPA 420.1/9065	EPA 9065	EPA 9065
Total Residue	SM2540 B	SM2540 B	-----	-----



Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
Filterable Residue	SM2540 C	SM2540 C	-----	-----
Nonfilterable Residue	SM2540 D	SM2540 D	-----	-----
Specific Conductance (Conductivity)	SM2510 B	SM2510 B	EPA 9050A	EPA 9050A
Sulfate	EPA 300.0	EPA 300.0/9056	EPA 9056	EPA 9056
Turbidity	SM2130 B	SM2130 B	-----	-----
<u>Purgeable Organics (volatiles)</u>				
Acetone	-----	EPA 624	EPA 8260C	EPA 8260C
Acetonitrile	-----	EPA 624	EPA 8260C	EPA 8260C
Acrolein	-----	EPA 624	EPA 8260C	EPA 8260C
Acrylamide	-----	EPA 624	EPA 8260C	-----
Acrylonitrile	-----	EPA 624	EPA 8260C	EPA 8260C
tert-Amyl Ethyl Ether	-----	EPA 624	EPA 8260C	EPA 8260C
Benzene	-----	EPA 624	EPA 8260C	EPA 8260C
Bromobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Bromochloromethane	-----	EPA 624	EPA 8260C	EPA 8260C
Bromodichloromethane	-----	EPA 624	EPA 8260C	EPA 8260C
4-Bromofluorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Bromoform	-----	EPA 624	EPA 8260C	EPA 8260C
Bromomethane	-----	EPA 624	EPA 8260C	EPA 8260C
n-Butylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
sec-Butylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
tert-Butylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
tert-Butyl Ethyl Ether	-----	EPA 624	EPA 8260C	EPA 8260C
Carbon Disulfide	-----	EPA 624	EPA 8260C	EPA 8260C
Carbon Tetrachloride	-----	EPA 624	EPA 8260C	EPA 8260C
Chlorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Chlorobenzene-d5	-----	EPA 624	EPA 8260C	EPA 8260C
Chloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
2-Chloroethyl Vinyl Ether	-----	EPA 624	EPA 8260C	EPA 8260C
Chloroform	-----	EPA 624	EPA 8260C	EPA 8260C
Chloromethane	-----	EPA 624	EPA 8260C	EPA 8260C
2-Chlorotoluene	-----	EPA 624	EPA 8260C	EPA 8260C
4-Chlorotoluene	-----	EPA 624	EPA 8260C	EPA 8260C
Cyclohexane	-----	EPA 624	EPA 8260C	EPA 8260C
Dibromochloromethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,2-Dibromo-3-Chloropropane (DBCP)	-----	EPA 624	EPA 8260C	EPA 8260C
Dibromofluoromethane	-----	EPA 624	EPA 8260C	EPA 8260C
Dibromomethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,2 Dibromomethane (EDB)	-----	EPA 624	EPA 8260C	EPA 8260C
trans-1,4-Dichloro-2-Butene	-----	EPA 624	EPA 8260C	EPA 8260C
trans-1,4-Dichloroethene	-----	EPA 624	EPA 8260C	EPA 8260C
1,2-Dichlorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
1,3-Dichlorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C



Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
1,4-Dichlorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Dichlorodifluoromethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,1-Dichloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,2-Dichloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,1-Dichloroethene	-----	EPA 624	EPA 8260C	EPA 8260C
cis-1,2-Dichloroethene	-----	EPA 624	EPA 8260C	EPA 8260C
trans-1,2-Dichloroethene	-----	EPA 624	EPA 8260C	EPA 8260C
1,2-Dichloropropane	-----	EPA 624	EPA 8260C	EPA 8260C
1,3-Dichloropropane	-----	EPA 624	EPA 8260C	EPA 8260C
2,2-Dichloropropane	-----	EPA 624	EPA 8260C	EPA 8260C
1,1-Dichloropropene	-----	EPA 624	EPA 8260C	EPA 8260C
cis-1,3-Dichloropropene	-----	EPA 624	EPA 8260C	EPA 8260C
trans-1,3-Dichloropropene	-----	EPA 624	EPA 8260C	EPA 8260C
Diethyl Ether	-----	EPA 624	EPA 8260C	EPA 8260C
1,4-Difluorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Ethyl Benzene	-----	EPA 624	EPA 8260C	EPA 8260C
Ethyl Methacrylate	-----	EPA 624	EPA 8260C	EPA 8260C
Gas Range Organics (GRO)	-----	EPA 8015D	EPA 8015D	EPA 8015D
2-Hexanone	-----	EPA 624	EPA 8260C	EPA 8260C
Hexachlorobutadiene	-----	EPA 624	EPA 8260C	EPA 8260C
Hexachloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
Isopropylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
4-Isopropyltoluene	-----	EPA 624	EPA 8260C	EPA 8260C
Iodomethane	-----	EPA 624	EPA 8260C	EPA 8260C
Isopropyl Ether	-----	EPA 624	EPA 8260C	EPA 8260C
Methyl Acetate	-----	EPA 624	EPA 8260C	EPA 8260C
Methylcyclohexane	-----	EPA 624	EPA 8260C	EPA 8260C
Methylene Chloride	-----	EPA 624	EPA 8260C	EPA 8260C
Methyl Ethyl Ketone (MEK)	-----	EPA 624	EPA 8260C	EPA 8260C
2-Methylnaphthalene	-----	EPA 624	EPA 8260C	EPA 8260C
4-Methyl-2-Pentanone	-----	EPA 624	EPA 8260C	EPA 8260C
2-Methyl-2-Propanol (MIBK)	-----	EPA 624	EPA 8260C	EPA 8260C
Methyl Tert Butyl Ether (MTBE)	-----	EPA 624	EPA 8260C	EPA 8260C
Naphthalene	-----	EPA 624	EPA 8260C	EPA 8260C
Pentafluorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
n-Propylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Styrene	-----	EPA 624	EPA 8260C	EPA 8260C
1,1,1,2-Tetrachloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,1,2,2-Tetrachloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
Tetrachloroethene	-----	EPA 624	EPA 8260C	EPA 8260C
Tetrahydrofuran	-----	EPA 624	EPA 8260C	EPA 8260C
Toluene	-----	EPA 624	EPA 8260C	EPA 8260C
Total Petroleum Hydrocarbons (TPH)	-----	EPA 1664A	EPA 1664A	EPA 9071A
1,1,2-Trichloro-1,2,2-Trifluoroethane	-----	EPA 624	EPA 8260C	EPA 8260C



Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
1,1,1-Trichloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,1,2-Trichloroethane	-----	EPA 624	EPA 8260C	EPA 8260C
Trichloroethene	-----	EPA 624	EPA 8260C	EPA 8260C
Trichlorofluoromethane	-----	EPA 624	EPA 8260C	EPA 8260C
1,2,3-Trichlorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
1,2,4-Trichlorobenzene	-----	EPA 624	EPA 8260C	EPA 8260C
1,2,3-Trichloropropane	-----	EPA 624	EPA 8260C	EPA 8260C
1,2,3-Trimethylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
1,2,4-Trimethylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
1,3,5-Trimethylbenzene	-----	EPA 624	EPA 8260C	EPA 8260C
Trihalomethanes	-----	EPA 624	EPA 8260C	EPA 8260C
Vinyl Acetate	-----	-----	-----	EPA 8260C
Vinyl Chloride	-----	EPA 624	EPA 8260C	EPA 8260C
Xylenes, Total	-----	EPA 624	EPA 8260C	EPA 8260C
m,p-Xylene	-----	EPA 624	EPA 8260C	EPA 8260C
o-Xylene	-----	EPA 624	EPA 8260C	EPA 8260C
Carbon Dioxide	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	-----
Ethane	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	-----
Ethylene (Ethene)	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	-----
Methane	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	RSKSOP-175 (GC-FID)	-----
<u>Extractable Organics</u> <u>(semivolatiles)</u>				
Acenaphthene	-----	EPA 625	EPA 8270D	EPA 8270D
Acenaphthylene	-----	EPA 625	EPA 8270D	EPA 8270D
Acetone	-----	-----	EPA 8270D	EPA 8270D
Acetophenone	-----	EPA 625	EPA 8270D	EPA 8270D
4-Aminobiphenyl	-----	EPA 625	EPA 8270D	EPA 8270D
Aniline	-----	EPA 625	EPA 8270D	EPA 8270D
Anthracene	-----	EPA 625	EPA 8270D	EPA 8270D
Atrazine	-----	-----	EPA 8270D	EPA 8270D
Benzaldehyde	-----	-----	EPA 8270D	EPA 8270D
Benzidine	-----	EPA 625	EPA 8270D	EPA 8270D
Benzoic Acid	-----	EPA 625	EPA 8270D	EPA 8270D
Benzo (a) Anthracene	-----	EPA 625	EPA 8270D	EPA 8270D
Benzo (b) Fluoranthene	-----	EPA 625	EPA 8270D	EPA 8270D
Benzo (k) Fluoranthene	-----	EPA 625	EPA 8270D	EPA 8270D
Benzo (ghi) Perylene	-----	EPA 625	EPA 8270D	EPA 8270D
Benzo (a) Pyrene	-----	EPA 625	EPA 8270D	EPA 8270D
Benzyl Alcohol	-----	EPA 625	EPA 8270D	EPA 8270D
Benzyl Chloride	-----	EPA 625	EPA 8270D	EPA 8270D
1,1-Biphenyl	-----	-----	EPA 8270D	EPA 8270D
Bis (2-chloroethoxy)	-----	EPA 625	EPA 8270D	EPA 8270D



Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
Methane				
Bis (2-chloroethyl) Ether	-----	EPA 625	EPA 8270D	EPA 8270D
Bis (2-chloroisopropyl) Ether	-----	EPA 625	EPA 8270D	EPA 8270D
Bis (2-ethylhexyl) Phthalate	-----	EPA 625	EPA 8270D	EPA 8270D
4-Bromophenyl Phenyl Ether	-----	EPA 625	EPA 8270D	EPA 8270D
Butyl Benzyl Phthalate	-----	EPA 625	EPA 8270D	EPA 8270D
2-sec-Butyl-4,6-Dinitrophenol	-----	EPA 625	EPA 8270D	EPA 8270D
Caprolactum	-----	-----	EPA 8270D	EPA 8270D
4-Chloroaniline	-----	EPA 625	EPA 8270D	EPA 8270D
4-Chloro-3-Methylphenol	-----	EPA 625	EPA 8270D	EPA 8270D
1-Chloronaphthalene	-----	EPA 625	EPA 8270D	EPA 8270D
2-Chloronaphthalene	-----	EPA 625	EPA 8270D	EPA 8270D
2-Chlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
4-Chlorophenyl Phenyl Ether	-----	EPA 625	EPA 8270D	EPA 8270D
Chrysene	-----	EPA 625	EPA 8270D	EPA 8270D
Cresols	-----	EPA 625	EPA 8270D	EPA 8270D
2-Cyclohexyl-4,6-Dinitrophenol	-----	EPA 625	EPA 8270D	EPA 8270D
Dibenzo (a,h) Anthracene	-----	EPA 625	EPA 8270D	EPA 8270D
Dibenzofuran	-----	EPA 625	EPA 8270D	EPA 8270D
1,2-Dichlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
1,3-Dichlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
1,4-Dichlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
3,3'-Dichlorobenzidine	-----	EPA 625	EPA 8270D	EPA 8270D
2,4-Dichlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
2,6-Dichlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
Diethyl Phthalate	-----	EPA 625	EPA 8270D	EPA 8270D
2,4-Dimethylphenol	-----	EPA 625	EPA 8270D	EPA 8270D
Dimethyl Phthalate	-----	EPA 625	EPA 8270D	EPA 8270D
Di-n-butyl Phthalate	-----	EPA 625	EPA 8270D	EPA 8270D
Di-n-octyl Phthalate	-----	EPA 625	EPA 8270D	EPA 8270D
2,4-Dinitrophenol	-----	EPA 625	EPA 8270D	EPA 8270D
2,4-Dinitrotoluene	-----	EPA 625	EPA 8270D	EPA 8270D
2,6-Dinitrotoluene	-----	EPA 625	EPA 8270D	EPA 8270D
Diphenylamine	-----	EPA 625	EPA 8270D	EPA 8270D
DRO	-----	EPA 8015D	EPA 8015D	EPA 8015D
Fluoranthene	-----	EPA 625	EPA 8270D	EPA 8270D
Fluorene	-----	EPA 625	EPA 8270D	EPA 8270D
Hexachlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
Hexachlorobutadiene	-----	EPA 625	EPA 8270D	EPA 8270D
Hexachlorocyclopentadiene	-----	EPA 625	EPA 8270D	EPA 8270D
Hexachloroethane	-----	EPA 625	EPA 8270D	EPA 8270D
Indeno (1,2,3-cd) Pyrene	-----	EPA 625	EPA 8270D	EPA 8270D
Isophorone	-----	EPA 625	EPA 8270D	EPA 8270D
2-Methyl-4,6-Dinitrophenol	-----	EPA 625	EPA 8270D	EPA 8270D
2-Methylnaphthalene	-----	EPA 625	EPA 8270D	EPA 8270D



Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
2-Methylphenol	-----	EPA 625	EPA 8270D	EPA 8270D
4-Methylphenol	-----	EPA 625	EPA 8270D	EPA 8270D
Naphthalene	-----	EPA 625	EPA 8270D	EPA 8270D
2-Nitroaniline	-----	EPA 625	EPA 8270D	EPA 8270D
3-Nitroaniline	-----	EPA 625	EPA 8270D	EPA 8270D
4-Nitroaniline	-----	EPA 625	EPA 8270D	EPA 8270D
Nitrobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
2-Nitrophenol	-----	EPA 625	EPA 8270D	EPA 8270D
4-Nitrophenol	-----	EPA 625	EPA 8270D	EPA 8270D
N-Nitrosodi-n-propylamine	-----	EPA 625	EPA 8270D	EPA 8270D
N-Nitrosodiphenylamine	-----	EPA 625	EPA 8270D	EPA 8270D
2, 2-oxybis(1-chloropropane)	-----	EPA 625	EPA 8270D	EPA 8270D
Pentachlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
Pentachloronitobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
Pentachlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
Phenanthrene	-----	EPA 625	EPA 8270D	EPA 8270D
Phenol	-----	EPA 625	EPA 8270D	EPA 8270D
Polynuclear Aromatic Hydrocarbons (PAHs)	-----	EPA 625	EPA 8270D	EPA 8270D
Pyrene	-----	EPA 625	EPA 8270D	EPA 8270D
Tetrachlorobenzenes	-----	EPA 625	EPA 8270D	EPA 8270D
1,2,4,5-Tetrachlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
2,3,4,5-Tetrachlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
2,4,6-Tribromophenol	-----	EPA 625	EPA 8270D	EPA 8270D
1,2,4-Trichlorobenzene	-----	EPA 625	EPA 8270D	EPA 8270D
2,4,5-Trichlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
2,4,6-Trichlorophenol	-----	EPA 625	EPA 8270D	EPA 8270D
<u>Pesticides/Herbicides/PCBs</u>				
Aldrin	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
alpha-BHC	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
beta-BHC	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
delta-BHC	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
gamma-BHC	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Chlordane (technical)	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
2,4-D	-----	-----	EPA 8151A Modified	EPA 8151A Modified
Dalapon	-----	-----	EPA 8151A Modified	EPA 8151A Modified
2,4-DB	-----	-----	EPA 8151A Modified	EPA 8151A Modified
4,4'-DDD	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
4,4'-DDE	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
4,4',-DDT	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Dicamba	-----	-----	EPA 8151A Modified	EPA 8151A Modified





Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
Dichloroprop	-----	-----	EPA 8151A Modified	EPA 8151A Modified
Dieldrin	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Dinoseb	-----	-----	EPA 8151A Modified	EPA 8151A Modified
Endosulfan I	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Endosulfan II	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Endosulfan Sulfate	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Endrin	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Endrin Aldehyde	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Endrin Ketone	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Heptachlor	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Heptachlor Epoxide	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
MCPA	-----	-----	EPA 8151A Modified	EPA 8151A Modified
MCPP	-----	-----	EPA 8151A Modified	EPA 8151A Modified
Methoxychlor	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
PCB-1016 (Aroclor)	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1221	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1232	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1242	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1248	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1254	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1260	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1262	-----	EPA 608/8082	EPA 8082	EPA 8082
PCB-1268	-----	EPA 608/8082	EPA 8082	EPA 8082
2,4,5-T	-----	-----	EPA 8151A Modified	EPA 8151A Modified
2,4,5-TP	-----	-----	EPA 8151A Modified	EPA 8151A Modified
Toxaphene	-----	EPA 608/8081A	EPA 8081A	EPA 8081A
Nitroguanidine	-----	-----	EPA 8330B	EPA 8330B
1,3,5-Trinitrobenzene	-----	-----	EPA 8330B	EPA 8330B
1,3-Dinitrobenzene	-----	-----	EPA 8330B	EPA 8330B
2,4,6-Trinitrotoluene	-----	-----	EPA 8330B	EPA 8330B
3,5-Dinitroaniline	-----	-----	EPA 8330B	EPA 8330B
2,4-Dinitrotoluene	-----	-----	EPA 8330B	EPA 8330B
2,6-Dinitrotoluene	-----	-----	EPA 8330B	EPA 8330B
2-Amino-4,6-Dinitrotoluene	-----	-----	EPA 8330B	EPA 8330B
2-Nitrotoluene	-----	-----	EPA 8330B	EPA 8330B
3-Nitrotoluene	-----	-----	EPA 8330B	EPA 8330B
4-Amino-2,6-Dinitrotoluene	-----	-----	EPA 8330B	EPA 8330B
4-Nitrotoluene	-----	-----	EPA 8330B	EPA 8330B
Hexahydro-1,3,5-Trinitro- 1,3,5-Triazine (RDX)	-----	-----	EPA 8330B	EPA 8330B



Parameter/Analyte	Potable Water	Nonpotable Water	Solid Hazardous Waste	
			Aqueous	Solid/Chemical
Methyl-2,4,6-Trinitrophenylnitramine (Tetryl)	-----	-----	EPA 8330B	EPA 8330B
Nitrobenzene	-----	-----	EPA 8330B	EPA 8330B
Nitroglycerin	-----	-----	EPA 8330B	EPA 8330B
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine (HMX)	-----	-----	EPA 8330B	EPA 8330B
PETN	-----	-----	EPA 8330B	EPA 8330B
Nitroglycerine	-----	-----	EPA 8330B	EPA 8330B
White Phosphorus	-----	-----	EPA 7580	EPA 7580
Thiodiglycol	-----	-----	RTI SOP-HPLC	RTI SOP-HPLC
Dimethyl Methyl Phosphonate(OMMP)	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
1,4-Oxathiane	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
1,4-Dithiane	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
Diisopropyl Methyl Phosphonate(OIMP)	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
Benzothiazole	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
4-Chlorophenyl Methyl Sulfide	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
4-Chlorophenyl Methyl Sulfoxide	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
4-Chlorophenyl Methyl Sulfone	-----	-----	8270D-Mod RTI SOP	8270D-Mod RTI SOP
<u>Characteristics</u>				
Corrosivity	-----	-----	EPA 9040C	SW 846 Ch7/9040C/9045C
Ignitability	-----	-----	EPA 1010/1030	EPA 1010/1030
Paint Filter Liquids Test	-----	-----	EPA 9095A	EPA 9095A
Synthetic Precipitation Leaching Procedure (SPLP)	-----	-----	EPA 1312	EPA 1312
Toxicity Characteristic Leaching Procedure	-----	-----	EPA 1311	EPA 1311
<u>Preparation Methods</u>				
Metals	-----	-----	3010A, 3020A	3050B
Purgeable Organics	-----	-----	5030B	5035
Extractable Organics	-----	-----	3510C	3545, 3546, 3550C



Analyte	Air
1,1,1-Trichloroethane	EPA TO-15
1,1,2,2-Tetrachloroethane	EPA TO-15
1,1,2-Trichloro-1,2,2-Trifluoroethane	EPA TO-15
1,1,2-Trichloroethane	EPA TO-15
1,1-Dichloroethane	EPA TO-15
1,1-Dichloroethene	EPA TO-15
1,2,4-Trichlorobenzene	EPA TO-15
1,2,4-Trimethylbenzene	EPA TO-15
1,2-Dibromoethane	EPA TO-15
1,2-Dichlorobenzene	EPA TO-15
1,2-Dichloroethane	EPA TO-15
1,2-Dichloropropane	EPA TO-15
1,3,5-Trimethylbenzene	EPA TO-15
1,3-Butadiene	EPA TO-15
1,3-Dichlorobenzene	EPA TO-15
1,4-Dichlorobenzene	EPA TO-15
1,4-Dioxane	EPA TO-15
2-Butanone	EPA TO-15
2-Hexanone	EPA TO-15
2-Propanol	EPA TO-15
4-Methyl-2-Pentanone	EPA TO-15
Acetone	EPA TO-15
Benzene	EPA TO-15
Benzyl chloride	EPA TO-15
Bromodichloromethane	EPA TO-15
Bromoform	EPA TO-15
Bromomethane	EPA TO-15
Carbon Disulfide	EPA TO-15
Carbon Tetrachloride	EPA TO-15
Chlorobenzene	EPA TO-15
Chlorodibromomethane	EPA TO-15
Chloroethane	EPA TO-15
Chloroform	EPA TO-15
Chloromethane	EPA TO-15
cis-1,2-Dichloroethene	EPA TO-15
cis-1,3-dichloropropene	EPA TO-15
Cyclohexane	EPA TO-15
Dichlorodifluoromethane	EPA TO-15
Ethanol	EPA TO-15
Ethyl Acetate	EPA TO-15
Ethylbenzene	EPA TO-15
Heptane (n-Heptane)	EPA TO-15
Hexachlorobutadiene	EPA TO-15
m,p-Xylene	EPA TO-15





American Association for Laboratory Accreditation

# *Accredited Laboratory*

A2LA has accredited

## **RTI LABORATORIES, INC.**

*Livonia, MI*

for technical competence in the field of

### **Mechanical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 13<sup>th</sup> day of November 2014.



  
\_\_\_\_\_  
President & CEO

For the Accreditation Council  
Certificate Number 0570.01  
Valid to October 31, 2016

*For the tests to which this accreditation applies, please refer to the laboratory's Mechanical Scope of Accreditation.*



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RTI LABORATORIES, INC.  
33080 Industrial Road  
Livonia, MI 48150  
Lloyd Kaufman Phone: 734 422 8000

MECHANICAL

Valid To: October 31, 2016

Certificate Number: 0570.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following tests on fasteners, metals, and alloys:

<u>Test Parameter</u>	<u>Test Methods</u>
Brinell Hardness (500, 1000, 3000 kg)	ASTM E10
Coating Thickness	ASTM B487
Coating Weight	ASTM A90, A428
Electron Microscopy (SEM/EDS)	ASTM B748, E986
Environmental Testing: Salt Spray	ASTM B117
Impact Testing (Charpy)	ASTM E23
Metallographic Analysis	
Case Depth	SAE J423
Cast Iron Rating	ASTM A247; SAE J158, J434
Depth of Decarburization	ASTM E1077; SAE J419
Grain Size	ASTM E112
Inclusion Content	ASTM E45 (Method A, C, & D)
Macroetching	ASTM A561, A604, E340, E381
Microetch	ASTM E407
Metallurgical Failure Analysis	ASTM E2332
Metallographic Preparation	ASTM E3
Microhardness (HK50-500G, HV0.05-0.5kg)	ASTM E384
MacroVickers	ASTM E72, E384

(A2LA Cert. No. 0570.01) 11/13/2014

Page 1 of 2

Test Parameter

Test Methods

Plating Adherence

ASTM B571

Rockwell Hardness (B, C, (15, 30) N, (15, 30) T)

ASTM E18; ASTM F606, F606M

Tension and Proof Load (0-60 klbs at Room Temperature)

ASTM A370, E8; SAE J995;  
JIS Z2201, Z2241

Plastic Strain Ratio (r-value)

ASTM E8, E517

Work Hardening Exponent (n-value)

ASTM E646





American Association for Laboratory Accreditation

# *Accredited Laboratory*

A2LA has accredited

## **RTI LABORATORIES, INC.**

*Livonia, MI*

for technical competence in the field of

### **Chemical Testing**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 13<sup>th</sup> day of November 2014.



  
\_\_\_\_\_  
President & CEO

For the Accreditation Council

Certificate Number 0570.02

Valid to October 31, 2016

*For the tests to which this accreditation applies, please refer to the laboratory's Chemical Scope of Accreditation.*



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

RTI LABORATORIES, INC.<sup>1</sup>  
33080 Industrial Road  
Livonia, MI 48150  
Lloyd Kaufman Phone: 734 422 8000

CHEMICAL

Valid To: October 31, 2016

Certificate Number: 0570.02

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory at the location listed above as well as the satellite laboratory location listed below to perform the following tests on fasteners, metals, and alloys:

<u>Test Parameter</u>	<u>Test Methods</u>
Cleanliness Level by Gravimetric Analysis	ISO 4405
Cleanliness Level of Fluids by Light Scatter Detection	ISO 4406
Cleanliness Level and Characterization by Microscopic Methods	ISO 4407
ICP-OES	ASTM D5185, E1613, E1645; UOP 714; EPA SW-846-3050A/6010A
Lead by ICP-OES	16 CFR 1303 using ASTM E1613; CPSC-CH-E1001-08
Loss on Drying by Thermogravimetry	ASTM E1868, SCAQMD Rule 1144
Measurement of Copper and Other Elements In Brake Friction Materials	SAE J2975-2011
OES (Carbon Steel) (C, Cu, Cr, Mn, Mo, Ni, P, S, and Si)	ASTM E415
Viscosity	ASTM D445
VOC Content	EPA Method 24, ASTM D2369
Water Content	ASTM D4017, D4377, D4928, E1064



<sup>1</sup>This accreditation also covers testing performed at the following satellite laboratories listed below:

RTI LABORATORIES, INC.  
31628 Glendale Avenue  
Livonia, MI 48150

<u>Test Parameter</u>	<u>Test Methods</u>
ICP-MS	EPA SW-846-3050A/6020
Hexavalent Chromium	EPA SW-846, Method 7196A
Ion Chromatography	ASTM D4327; EPA SW-846-9056
Lead by ICP-MS	16 CFR 1303 using ASTM D5673; CPSC-CH-E1003-09.1
Measurement of Copper and Other Elements In Brake Friction Materials	SAE J2975-2011
PCBs	EPA SW-846, Method 8082
Phenols	EPA SW-846, Method 9065