The American Association for Laboratory Accreditation

World Class Accreditation

Accredited Laboratory

A2LA has accredited

TM LABORATORIES, LLC

Gettysburg, PA

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 20th day of July 2009.

President & CEO
For the Accreditation Council
Certificate Number 3999.01
Valid to 31 July 2011

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

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SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005

TM LABORATORIES, LLC
123 Main Street
Gettysburg, PA 17320
Ken Horn Phone: 717 334 5555

CHEMICAL

Valid To: July 31, 2011 Certificate Number: 3999.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following types of chemical analysis tests:

TEST DESCRIPTION	TEST METHOD
Determination of Trace Metals in Ultra Pure Water (UPW)	
Measurement of TM in UPW by ICP-MS	ICP-0007
Measurement of Trace Metals in UPW by High Resolution ICP-MS	ICP-0013
Determination of Trace Metals in Chemicals	
Determination of Trace Metals in Chemicals	ICP-0010
Direct Analysis of Trace Elements in Chemicals by High Resolution ICP-MS	ICP-0014
TM Analysis of Chemicals by Dilute & Shoot	CHM-0008
TM by Closed Evaporation	CHM-0027
Thiers Chambers	CHM-0029
Graphite Furnace Analysis (GFA) in the Chemicals Laboratory	CHM-0033
Determination of Trace Elements on Wafers by VPD ICP-MS or GFAA	
Determination of Trace Metals on Silicon Wafer Surface by VPD	VPD-0002
Determination of Boron and Phosphorous on Wafers	VPD-0005

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TEST DESCRIPTION	TEST METHOD
Wet Chemistry	
Determination of Dissolved Silica in UPW by Colorimetry	WAT-0009
Determination of Total Oxidizable Carbon (TOC) in UPW	WAT-0020
Determination of Trace Anions & Cations	
IC Extractable Compounds	WAT-0001
IC Analysis of Water for Organic Acids and Fluoride	WAT-0007
IC Analysis of Amines in Cleanroom Air	WAT-0019
Determination of Trace Anions & Cations in UPW by Ion Chromatography	WAT-0026
Acid & Base Anhydrides in Air	WAT-0029
IC Analysis if Anions & Cations in Air- High PPB Level	WAT-0033
Organic Analysis by Thermal Desorption (TD) GC-MS	
GC-MS Identification of Organics on Wafers	ORG-0003
Organic Contaminants in Air	ORG-0004
Organic Analysis by Thermal Desorption (TD) GC-MS	
Outgassing by TD-GC-MS	ORG-0006
Off-Line Outgassing by GC-MS	ORG-0009
Solvent Assays by GC or GC-MS	
Area % Assay for Solvents or Mixtures by Gas Chromatography	ORG-0005
Quantitative Analysis of Solvent Mixtures by GC-TCD Weight %	ORG-0008
Qualitative Analysis of Liquid Samples by GC-MS	ORG-0010
Semi Volatile Organics in Water	ORG-0011
GC-MS Identification of Organics on Wafer, ASTM "F-1982-99, Method B - Non- Breaking method"	ORG-0012
Determination of Particles	
Determination of Optical Particle Counts in UPW	WAT-0015
Determination of Particles by SEM-DCM	WAT-0016
Particles by Nomura	WAT-0017
Bacterial Examination of Water	
Cultured Bacteria in Water	WAT-0012
EPI Fluorescence Bacteria – Direct Count	WAT-0013
Determination of Boron and/or Phosphorous in SiO_2 (BPSG, BSG, PSG Films) by ICP-OES	
Determination of Boron and/or Phosphorous in SiO_2 (BPSG, BSG, PSG Films) by ICP-OES	TFL-0003
% Boron and % Phosphorous Analysis of 300mm Wafers	TFL-0009
Wafer Mapping for BPSG, PSG, BSG Films	TFL-0012
Non-Breaking Wafer Mapping of 300mm Wafers	TFL-0021

TEST DESCRIPTION	TEST METHOD
Determination of Phosphorous in SiO_2 (BPSG and PSG Films) by Colorimetry	
Determination of Phosphorous in SiO_2 (BPSG and PSG Films) by Colorimetry	TFL-0007
% Boron and % Phosphorous Analysis of 300mm Wafers	TFL-0009
Wafer Mapping for BPSG, PSG, BSG Films	TFL-0012
Non-Breaking Wafer Mapping of 300mm Wafers	TFL-0021
On-site Sampling	
Sampling of Liquid Processing Chemicals	CHM-0032
Determination of Ti & W in Thin Films by ICP-OES	TFL-0004
Determination of Ni & Fe in Thin Films by ICP-OES	TFL-0006
Silicon Thin Film Analysis	TFL-0008
Determination of % Copper in Wafer by ICP-OES	TFL-0014
Water Sampling	WAT-0022

On the following types of materials:
Wafer, Ultra Pure Water, Chemicals and Air Analysis for the Semiconductor Industries