HORIBA
Scientific

2012 Training Courses

GDS

ICP-OES

Particle Size Analysis

C/S & O/N/H Analyzis

S & Cl in Petroleum

X-Ray Fluorescence

Exceeding Customer Expectations

HORIBA Jobin Yvon S.A.S.
16 - 18 rue du canal – 91165 Longjumeau
Tel: +33 (0)1 64 54 13 00 Ext: 12 32 – Fax: +33 (0)1 69 09 17 27
www.horiba.com/scientific

JOBIN YVON
Technology

Training Courses calendar 2012

HORIBA Scientific offers many types of training courses tailored to your particular requirements:

- **Training course at our approved HORIBA Scientific training center:** learn and share your experience with other users and acquire the basics of the technique. You will be able to directly use this knowledge for your applications in your own laboratory.

- **Training on-site,** performed by one of our HORIBA Scientific application experts:

Training on-site will permit you to learn about the basics of the technique for your instrument: theory, use of the software and analytical methodology for your sample analysis requirements on the instrument.
The analytical assistance will help you to optimize the development of your method for your specific applications: optimize operating conditions, study of possible analytical problems and how to correct them.

Certificates are given to every attendee for every course

	Course Title	Date	Duration
Glow Discharge Spectrometry			
GD eng	User training courses	April 2nd to 6th, 2012 October 22th to 26th, 2012	4.5 days
Plasma (ICP)			
ICP eng	User training courses for ICP	April 16th to 20th, 2012 July 9th to 13th, 2012 September 17th to 21th, 2012	5 days
Particle Size Analysis			
PSA1 eng	PSA User training courses on laser diffraction	June 12th, 2012 October 2nd, 2012	1 day
PSA3 eng	PSA User training courses on dynamic light scattering technique	June 14th, 2012 October 4th, 2012	1 day

Training Courses calendar 2012

	Course Title	Date	Duration
EMIA/EMGA/SLFA/XGT WR			
HOR1 eng	EMIA User training courses	September 24th, 2012	1 day
HOR2 eng	EMGA User training courses	September 25th, 2012	1 day
HOR3 eng	SLFA User training courses	September 26th, 2012	1 day
HOR4 eng	XGT WR User training courses	September 27th, 2012	1 day
Spark and 3D Metal			
ET1 eng	User training courses on site training	Contact us	2 days
On site Training			
Formsite	On site training (living and travelling expenses not included)	Contact us	Contact us
Assisana	Analytical Assistance (living and travelling expenses not included)	Contact us	Contact us

Our trainers are Experts in each Elemental Analysis and Particle Size Technique

They will provide you with advice and guidance to make the most of your HORIBA Scientific instrument.

You will gain confidence and experience in the analysis of your samples.

GD eng

Duration 4.5 days

Dates April 2nd to 6nd, 2012
October 22th to 26th, 2012

Who should attend

Users of Horiba Scientific GD spectrometers

Schedule

The training is done in the laboratory

Objectives

- Know how to optimize the instrumental parameters,
- Ability to use of the software,
- Perform the bulk and surface calibrations,
- Analysis of unknown samples,
- Know and use of the accessories and how to use them,
- Instrument diagnostics and how to interpret,
- How to identify and rectify problems.

The 6th GD Day will be held on September 21th, 2012. Contact us !

1st Day: 9:00 - 17:00

a) Fundamentals of GD-OES
- Principle, source, optics, structure of the software,
- Some applications,
- Operational methodology,
- Principles of instrument control.

b) How to do an analysis in GD-OES (hands-on)
- Instrument control,
- Important parameters,
- Creation of an analytical method,
- Optimization for a given application,
- Precautions,
- Qualitative analysis,
- Curve treatments.

2nd Day: 9:00 - 17:00

a) Principle of calibration for bulk and surface
- Sequence of measurement,
- Reference materials,
- Sample preparation,
- Bulk analysis principles,
- Surface analysis principles.

b) Example of calibration (hands-on). Bulk calibration creation of an analytical program, calibration, optimization, recalibration, mini-calibration, SPC

3rd Day: 9:00 - 17:00

a) Use of the monochromator
- N+1 channel
- Image

b) Maintenance (cleaning). Lamp/lens
c) Tests of different anodes (2mm, 7mm)
d) Diagnostic tests. QC software
e) Preparation of a calibration for surface. Reference materials. Layered samples. Measurement of sputtering rates

4th Day: 9:00 - 17:00

Example of surface calibration.
- Optimization of the curves,
- Recalibration,
- Possible problems.

5th Day: 9:00 - 12:00

- Advanced features in the software,
- Special applications,
- Published papers,
- Reference books and ISO standards,
- Layered mode for surface calibration,
- Discussions, information. Questions/Answers.

For further information, contact:
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ICP-OES user training

ICP eng

Duration 5 days

Dates April 16th to 20th, 2012
July 9th to 13th, 2012.
September 17th to 21th, 2012

Who should attend

Users of HORIBA Scientific ICP-OES spectrometers

Schedule

Training room and applications laboratory
Theoretical part: 10 hours
Practical part: 25 hours

Objectives

- Overview of the ICP-OES technique,
- Acquire theoretical and practical knowledge on ICP-OES spectrometers,
- Learn to use the software (latest version used in the laboratory),
- Learn methodology for method development and major analytical parameters,
- Know how to set up an analytical strategy with an unknown sample,
- Interpret results,
- Follow the performances of the ICP-OES spectrometer over the time,
- Identify dysfunctions and their origins and solve these dysfunctions.

1st Day: 9:00 - 13:00 *Welcome, theory – ICP-OES instrument and method development*
- Theory of ICP-OES: principle and instrumentation,
- Method development: wavelength selection, optimization of the parameters and interpretation of 1st results,
- Maintenance.

14:00 - 17:00 *Practical - software and analytical parameter*
- Influence and optimization of nebulization flow,
- Influence and optimization of sheath gas flow,
- Influence of integration time.

2nd Day: 9:00 - 17:00 *- Software and methodology for method development*
- Creation of an analytical method,
- Selection of analytical lines,
- Semi-quantitative analysis,
- MASTER and CLIP tools,
- Selection of entrance and exit slits,
- Background correction positioning,
- Determination of the limit of detection.

3rd Day: 9:00 - 13:00 *Theory – Interferences in ICP-OES and performances*
- Interferences in ICP-OES (spectral interferences, matrix effects…),
- Analytical methods to overcome interferences: Standard addition, Inter-element correction, Internal standardization,
- Analytical Performances.

14:00 - 17:00 *Practical - Analytical method development strategy with an unknown sample*
- Work in the applications laboratory on an unknown sample , defined according to the application field of trainees,
- Questions.

4th Day: 9:00 - 13:00 *Practical - Analytical method development strategy with an unknown sample*
- Work in the applications laboratory on an unknown sample defined according to the application field of trainees (continued),
- Questions.

14:00 - 15:00 *Theory - Diagnostics in ICP-OES*
- Critical parameters of the ICP-OES,
- Set-up of a follow-up procedure,
- Interpretation of the data,
- Questions.

15:00 - 17:00 *Practical study of dysfunctions*
- Creation of a method for diagnostics purposes,
- Measurements of parameters,
- Simulation of dysfunctions and interpretation of data,
- Maintenance reminder,
- Questions.

5th Day: 9:00 - 17:00 *Theory and Practical - Accessories in ICP-OES (according to trainees' interest)*
- Hydride generation with CMA,
- Oil analysis with Wear metals in oil kit,
- Use of the oxygen kit for organic analysis,
- Questions.

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Particle size analyser user training courses

PSA1 eng

Duration 1 day

Dates June 12th 2012
October 2nd 2012

Who should attend

Users equipped with a laser diffraction analyzer from HORIBA

Schedule

The training is done in the training room and in the laboratory

Objectives

- Acquire theoretical and practical knowledge on the particle size analyzer,
- Learn to optimize operating conditions for any sample.

9:00 - 17:00

- Presentation of the HORIBA Scientific instruments,
- Theory of the technique,
- Description of the PSA instruments,
- Software presentation,
- Sampling and dispersion,
- Method development,
- First level maintenance,
- Instrument verification,
- General analytical discussion.

PSA3 eng

Duration 1 day

Dates June 14th 2012
October 4th 2012

Who should attend

Users equipped with a DLS analyzer from HORIBA

Schedule

The training is done in the training room and in the laboratory

Objectives

- Understand DLS and zeta potential fundamentals,
- Learn to collect good data and interpret results.

9:00 - 17:00

- Dynamic light scattering (DLS) theory,
- Zeta potential theory and colloid stability,
- Sample preparation,
- SZ-100 software functions,
- Instrument verification,
- Result interpretation,
- Standards and best practices.

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C/S user training course on a HORIBA Analyzer

HOR1 eng

Duration 1 day

Date September 24th 2012

Who should attend

Users of the EMIA C/S analyzer

Schedule

The training is done in the HORIBA Scientific laboratory. The duration of the practical work is 1 day

Objectives

- Know how to optimize the instrumental parameters,
- Control of the analytical conditions,
- How to interpret the results.

9:00 - 17:00

- Presentation of HORIBA Scientific instruments,
- Theory of the technique,
- Description of the EMIA analyzer,
- Leak and mechanical tests,
- Use and choice of accelerators and flux,
- Preparation of samples,
- Software presentation,
- Determination of the optimal analytical conditions,
- Realization of a calibration,
- General analytical discussion,
- First level preventive maintenance.

O/N/H user training course on a HORIBA Analyzer

HOR2 eng

Duration 1 day

Date September 25th 2012

Who should attend

Users of the EMGA O/N/H analyzer

Schedule

The training is done in the HORIBA Scientific laboratory. The duration of the practical work is 1 day

Objectives

- Know how to optimize the instrumental parameters,
- Control of the analytical conditions,
- How to interpret the results.

9:00 - 17:00

- Presentation of HORIBA Scientific instruments,
- Theory of the technique,
- Description of the EMGA analyzer,
- Leak and mechanical tests,
- Use and choice of accelerators and flux,
- Preparation of samples,
- Software presentation,
- Determination of the optimal analytical conditions,
- Realization of a calibration,
- First level preventive maintenance,
- General analytical discussion.

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Sulfur & Chlorine in Oil user training course on a HORIBA Analyzer

HOR3 eng

Duration 1 day

DatE September 26th 2012

Who should attend

Users of the SLFA/MESA

Schedule

The training is done in the HORIBA Scientific laboratory. The duration of the practical work is 1 day

Objectives

- Know how to optimize the instrumental parameters,
- Control of the analytical conditions,
- How to interpret the results.

9:00 - 17:00

- Presentation of HORIBA Scientific instruments,
- Theory of the technique,
- Description of the SLFA analyzer,
- Preparation of sample cells,
- Software presentation,
- Determination of the optimal analytical conditions,
- Realization of a calibration and interpretation of the results,
- First level preventive maintenance,
- General analytical discussion.

XGT user training course on a HORIBA Analyzer

HOR4 eng

Duration 1 day

Date September 27th 2012

Who should attend

Users of the XGT X-Ray Fluorescence Analyzer

Schedule

The training is done in the HORIBA Scientific laboratory. The duration of the practical work is 1 day

Objectives

- Know how to optimize the instrumental parameters,
- Control of the analytical conditions,
- How to interpret the results.

9:00 - 17:00

- Presentation of HORIBA Scientific instruments,
- Theory of the technique,
- Description of the XGT analyzer,
- Preparation of samples (solid/liquid),
- Software presentation,
- Realization of a calibration,
- Identification of the different peaks in the spectra,
- Correction of spectral interferences,
- First level preventive maintenance,
- General analytical discussion.

For further information, contact:
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Spark and 3D Metal

ET1 eng

Duration	to be mutually agreed
Fees	Contact us
Dates	to be mutually agreed
Who should attend	
Users equipped with the HORIBA Scientific Instrument	
On site training	

Objectives

- Sample preparation,
- Choice of wavelengths,
- Know how to check and optimize the instrumental parameters,
- Control of the analytical conditions,
- Calibration of the instrument,
- How to interpret the results,
- Optimization for surface analysis,
- Diagnostics.

On site training and Analytical Assistance

Formsite or Assisana

Duration	to be mutually agreed
Dates	to be mutually agreed
Who should attend	
Users equipped with the HORIBA Scientific Instrument	
On site training	

Objectives

- Meet your specific needs with a customized training,
- Practice and improve your knowledge, by taking advantage from the experience of the HORIBA application specialists.

Schedule of on site training (example)

- We define together the program of the training beforehand,
- Examples: User training on ICP-OES, Use of MASTER, CLIP, etc.

Schedule of an analytical assistance (example)

- Analysis and results diagnostics, operating conditions optimization, matrix matching, reagent blanks…
- Advice and operational help. Example: Analysis of major elements in stainless steel, analysis of trace elements in water…

For further information, contact:
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Registration Form

Training course: ..... Date: .....

Family Name: ..... First Name: .....

Company/Organisation: .....

Address: .....

.....

Telephone Number: ..... Fax: .....

Email: .....

Purchase order number: .....

Invitation letter requested: .....

If yes:

Passport number: .....
Date of passport validity: .....
Date of birth: .....
Place of issue (as mentioned on the passport): .....

Accomodation at hotel:

Date of arrival: .....
Date of departure: .....
Additional hotel dates (if requested in Paris): .....

Date and signature

Stamp of the company

Information

Registration: fill in the form and send it back by FAX or Email four weeks before beginning of the training.
Registration fees: the registration fees include the training courses and documentation. Hotel, transportation and living expenses are not included except lunches which are taken in the HORIBA Scientific Restaurant during the training.
Your contact: HORIBA Jobin Yvon SAS, 16-18 rue du Canal, 91165 Longjumeau, FRANCE Tel: + 33 1 64 54 13 00 Ext: 12 32
Fax: + 33 1 69 09 17 27

E-Mail: services.jyfr@horiba.com
Siret Number: 837 150 366 00024

HORIBA Scientific continues contributing to the preservation of the global environment through analysis and measuring technology

Certified ISO 14001 in 2009, HORIBA Scientific is engaged in the monitoring of the environmental impact of its activities during the development, manufacture, sales, installation and service of scientific instruments and optical components. Training courses include safety and environmental precautions for the use of the instruments.

HORIBA Scientific provides training and application courses focused on ICP, GD, Particle Size and elemental analyzers. Courses range from basic to advanced levels and are taught by application experts. The theoretical sessions aim to provide a thorough background in the basic principles and techniques. The practical sessions are directed at giving you hands-on experience and instructions concerning the use of your instrument, data analysis and software. We encourage users to raise any issues specific to their application. At the end of each course a certificate of accomplishment is awarded.
Standard, customized and on-site training courses are available in France, Germany, USA and also at your location. Dates of the training calendar 2012 are only available for HORIBA Jobin Yvon France training center.

Registration

Fill in the form on page 10 and:

- Email it to: services.jyfr@horiba.com
- Or Fax it to: +33 (0)1 69 09 17 27
- More information, tel: +33 (0)1 64 54 13 00 ext 12 32

General Information

The invoice is sent at the end of the training.
A certificate of participation is also given at the end of the training.
We can help you to book hotel accommodation.
Following your registration you will receive a package including training details and course venue map. We will help with invitation letter for visa, but HJY are not responsible for any visa refusal.

Pricing

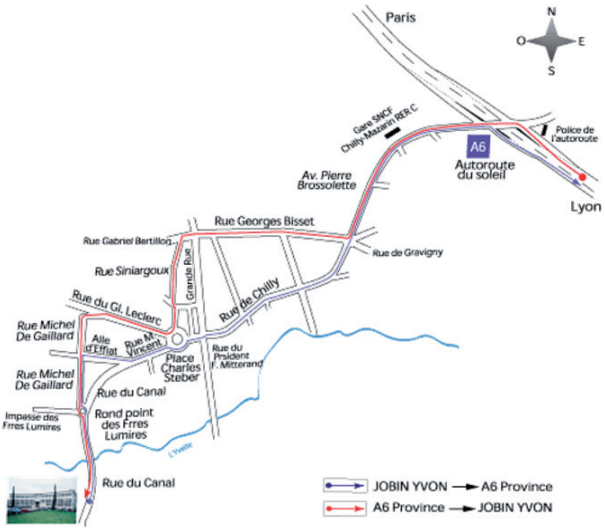
Include refreshments, lunches during training and handbook. Hotel transportation, accommodation and evening meals are not included.

Location

Longjumeau (France, 20 km from Paris), or at your facility for on-site training courses. Training courses can also take place in subsidiaries in Germany or in the USA.

Access to HORIBA Jobin Yvon, Longjumeau

HORIBA Jobin Yvon SAS
16 - 18 rue du canal
91165 Longjumeau - FRANCE



From the south A6 highway

- Highway A6 to Paris, take the exit N° 5 «Chilly-Mazarin». When out, turn left to Longjumeau direction.

From Paris on A6 highway

- Take Porte d'Orléans A6 A / Porte d'italie A6 B.
- Follow highway A6
- Don't take the first exit «Longjumeau»
- Continue on A10 and follow «Chartres, Orléans, Bordeaux»
- On A10, Keep on the left line and follow «Etampes, Orléans, Montlhéry, La Ville du Bois»
- When on the N20, take the first exit on the right «Longjumeau, Saulx les Chartreux, Villebon»

From the RER C station SNCF Longjumeau

- Our site is ten minutes walking from the station

From Roissy

- RER B – Station Massy-Palaiseau
- RER C – Station Longjumeau

HORIBA
Scientific

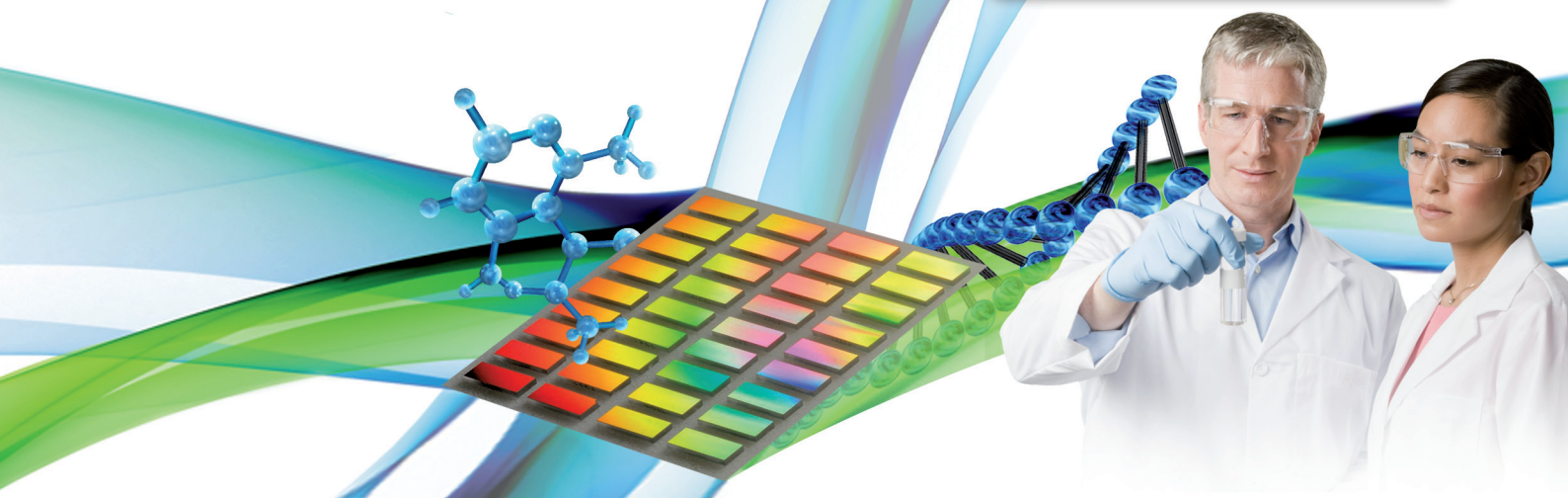
Explore the future

Molecular & Microanalysis
Raman Spectroscopy
Fluorescence
SPRi
EDXRF

Optical Spectroscopy
Diffraction gratings
Detectors
OEM Spectrometers
Monochromators

Surface & Thin Film Characterization
Ellipsometry
Cathodoluminescence
GD-OES

Elemental Analysis
ICP-OES
C/S & O/N/H Analyzers
S & Cl in oil Analyzers



Particle Characterization
Laser Diffraction
Light Scattering

Forensics
Light Sources
Image Treatment Software

JOBIN YVON
Technology

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