

# Agilent OpenLAB ECM Intelligent Reporter

An easy-to-use solution to meet the complex reporting needs of the analytical laboratory



## Key benefits

- Substantially reduce tedious labor required to produce reports
- Increase quality and reduce time for report review and approval through intelligent reporting
- Simplify understanding and justification of investment in analysis

## Reporting – a major bottleneck in analytical laboratories

Report creation has become a very time-consuming task in the analytical laboratory, in which the reporting needs range from flexible development reports to complex, calculation-rich QA reports that must meet regulatory guidelines. Often, users have to transfer analytical results into applications such as Microsoft Excel to generate their final reports.

## Faster reports, fewer mistakes!

The new OpenLAB Enterprise Content Manager (ECM) Intelligent Reporter helps analytical laboratories to create their final reports faster and helps to meet compliance requirements. It provides fully flexible, query-based result selection and offers all the benefits of data organization and result representation that a relational database can offer.

## A new approach to meet the reporting challenge

Agilent OpenLAB ECM Intelligent Reporter is a centralized, server-based reporting application for chromatographic data stored in OpenLAB (ECM). It is easy to use and helps you create complex result reports in three simple steps:

**Step 1** – use built-in report templates or create your own using the intuitive graphical report template editor.

**Step 2** – select your report content from the chromatographic data of the entire laboratory through a simple database query.

**Step 3** – generate your report.

**It's as easy as 1-2-3!**



**Agilent Technologies**

# Agilent OpenLAB ECM Intelligent Reporter

## A wide range of reporting capabilities

- Custom calculations for any standard or advanced result calculation
- Single injection reports with chromatograms, spectra and calibration curves
- Sequence summary reports with statistics and calculations
- Combining results over time and from across analytical operations
- Complex reports such as dissolution testing
- Cross-sequence summaries and trend chart reports

## Intelligent reporting

- Interactive reporting with drilled-down results and parameters
- Flagging of outliers or out-of-spec values
- Search-based report content selection
- Condensation of information by visualizing key results
- Decision-based result presentation
- Interactive report elements configured to show or hide information
- Full IQ/OQ from Agilent

# key features

## Fast, flexible, high quality reporting

Agilent OpenLAB ECM Intelligent Reporter provides:

- Reports on ECM administration, ECM usage
- Search-based reporting
- Simple and advanced calculations
- Trend charts
- Support for Agilent ChemStation, Agilent ChemStore and Agilent OpenLab Instrument Control Manager (ICM) result data
- Scalable, ECM-based reporting infrastructure
- Database-based reporting for ECM systems with Oracle or MS SQL Server
- Manage report templates and filter definitions in ECM

## Easy-to-use Report Template Editor (RTE)

- WYSIWYG reporting – what you see is what you get!
- Preview of report with data selected on the OpenLAB ECM Intelligent Reporter client in a separate tab
- New editor embedded directly into the OpenLAB ECM Intelligent Reporter client
- Large number of preconfigured report items (snippets) such as tables and signal plots, make template creation fast and simple
- ECM privilege for access to template editing

## Seamless integration in Agilent's software solutions

Agilent OpenLAB ECM Intelligent Reporter:

- Integrates into Agilent ChemStation or Agilent OpenLAB Instrument Control Manager (ICM), allowing users to create reports directly from the application
- Reports chromatographic results stored in Agilent OpenLAB ECM or ECM Workgroup,
- Stores reports, templates and queries securely and maintains revision control

# new

## Revision 2 features:

- Reporting of graphics such as chromatograms, spectra and calibration curves
- Easy-to-use report template editor
- Quick query function for fast access to results

Easy to use

# Powerful and flexible reporting

## What you see is what you get

- Prebuilt report items (snippets) can be added to a report template by drag & drop
- Snippets can be a simple single text field or a composite group of report items such as text fields, tables or signal plots
- Snippets can be designed by Agilent and can easily be added to an existing installation without failing OQ
- Easily verify your report template design with report preview during design

**Sequence Summary Report**  
Creation 2/19/2010 13:55:29

**Name : des-hyd cis tramadol (C)**

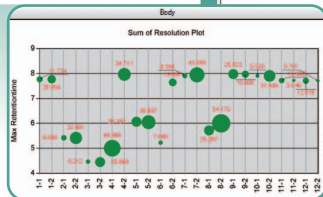
Name	Inj	RT	Area	Height	Amount	Unit	Vial
Mean		1.1015	0.8197	1.332			
Std. ...		1.4872	1.1274	1.812			
%RSD		135.000	137.000	136.000			

**Name : des-hyd trans tramadol (B)**

### WYSIWYG editing pane

- Reporting of one or multiple signals from one or multiple injections (even across sequences)
- Overlaid, separated or stacked layout
- Extensive signal scaling, grouping and labeling options (custom peak label formulas)
- Filtering of signals for sample names, signal names, and so on

### Smart data visualization in bubble charts.



## Diverse applicability in all industry segments

Agilent OpenLAB ECM Intelligent Reporter supports the reporting needs of QA/QC and R&D laboratories in the chemical and pharmaceutical industries. Reporting examples include dissolution testing, method development or refinery gas analysis.

### Flexible reporting

- One template per reporting category
- Variables (such as sample volumes shown here)
- Analysis-specific values entered in variables section
- Tailor-made reports from one template

Time (min)	Vessel 1	Vessel 2	Vessel 3	Vessel 4
5	284764.00	284266.00	284114.00	288882.00
15	626739.00	626690.00	647260.00	638402.00
30	966957.00	968346.00	898880.00	891427.00
60	1058546.00	1037216.00	1089527.00	1060674.00

Time (min)	Vessel 1	Vessel 2	Vessel 3	Vessel 4	Mean	StDev	RSD
5	25.13	25.00	25.07	25.62	25.2	0.3	1.0
15	59.40	59.39	61.44	60.60	60.2	1.0	1.7
30	91.70	91.92	85.33	84.62	88.4	4.0	4.6
60	100.49	98.46	101.63	100.71	100.3	1.3	1.3

### Powerful reporting using built-in calculations module

Agilent OpenLAB ECM Intelligent Reporter allows you to freely combine calculation modes for different sample components.

### Example: Dissolution Testing

- Use comprehensive calculation functionality
- Display custom calculation results only
- Use graphics to visualize analytical results
- One summary page for final results

Inst Name	Inst Info	Type	Month(s)	# of Injections	# of Samples
Agilent_4112	LC	LC	January	54	54
Agilent_4112	LC	LC	February	54	54
Instrument 1	LC	LC	February	108	108

Summary Statistics:  
Total number of instruments: 3  
Total number of injections: 212  
Average per instrument per Month: 21.2  
Maximum per instrument per Month: 28  
Minimum per instrument per Month: 168

Compound	Ref. Area	Area	StDev	%RSD	StDev	%RSD
Propane	0.484	19825	3.97	4.03	0.13	0.38
Ethane	0.619	7992	1	1.00	0.04	0.46
Hydrogen	0.509	142720	7.38	8.1	10.97	9.91
Acetylene	0.511	15142	1.08	2.04	10.74	10.46
Ethylene	0.554	95380	2.01	2.01	1.83	1.1
Acetylene	0.565	71620	1.99	2.84	3.89	4.48
Isobutane	0.600	15867	1.99	2.08	4.41	6.38
Propane	0.606	16067	1.99	4.46	9.1	15.6
Hydrogen	0.788	48847	10.38	10.26	9.26	3.01
Isobutane	0.792	20122	2.13	22.14	22.24	37.42

Also use Agilent OpenLAB ECM Intelligent Reporter for lab asset utilization or chemical applications such as refinery gas analysis (RGA)

# Faster result review and approval

## Faster result review

Use Agilent OpenLAB ECM Intelligent Reporter to mark pass/fail results, limit violations and other comparisons with defined values in the final report. Limits can be predefined or dynamically extracted from results.

## Faster review and approval

Reports, templates and queries are stored securely with revision control for electronic report review and report management. With Agilent OpenLAB ECM you can automate report review and approval in a custom-designed business process. This automation can reduce the time for report review and approval steps from weeks to days.

## Summary

OpenLAB ECM Intelligent Reporter offers more capabilities than any other chromatographic reporting package and lets you:

- Automate final report assembly within the system
- Combine results over time and across systems
- Facilitate management of analytical resources in a single application from Agilent

**Impurity Profiling**  
Creation Date: 3/6/2010 10:21:11 PM

Sample Test: **Failed tests are marked red**

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
PARAMCOL	1015.185	1006.053	1021.625	1019.504	1009.426	1020.157
Impurity detected via threshold (C) Value	0.01944	0.02045	0.02036	0.04613	0.05613	0.02429
Impurity detected via threshold (B) Value	0.01969	0.02052	0.02032	0.04289	0.04950	0.02267
Impurity detected via threshold (A) Value	0.02079	0.02055	0.02071	0.04192	0.02279	0.01971
Total Impurity (%)	0.826	0.788	0.816	0.977	0.721	0.882

Applied rules for active sample tests:  
 # 1 Area precision of the main compound must be <= 1 %  
 # 2 Relative line precision must be <= 0.5 %  
 # 3 Precision for areas of impurities from 0.05 up to the 0.4 % level must be <= 10 %  
 # 4 Precision for areas of impurities from 0.05 to the 0.2% level area precision should be <= 20 %  
 # 5 Precision for impurities must be <= 0.5 %

Impurity Profiling report visualizing results with limit failures by marking the cells in red.

## Supported configurations

<b>Data acquisition</b> <b>Agilent OpenLAB ICM Server:</b> <ul style="list-style-type: none"> <li>• Microsoft Windows 2003 Server Standard or Enterprise Edition SP2</li> <li>• Agilent OpenLAB ICM, rev. 3.3.2 SP2 or higher</li> </ul>	<b>Agilent ChemStation Revision:</b> <ul style="list-style-type: none"> <li>• Rev. B.03.02 or higher</li> </ul>
<b>Data management</b> <b>Agilent OpenLAB ECM:</b> <ul style="list-style-type: none"> <li>• Microsoft Windows 2003 Server Standard or Enterprise SP1/SP2</li> <li>• Agilent OpenLAB ECM Enterprise software, rev. 3.3.2 SP1</li> </ul>	<b>Agilent OpenLAB ECM Workgroup:</b> <ul style="list-style-type: none"> <li>• Microsoft Windows 2003 Server Standard or Enterprise SP2</li> <li>• Agilent OpenLAB ECM Workgroup Software, rev. 3.3.1 (build 358) and rev 3.3.2 SP1</li> </ul>
<b>OpenLAB ECM database</b> <b>Oracle:</b> <ul style="list-style-type: none"> <li>• Oracle Database 10g (10.2.03 or 10.2.04)</li> <li>• Agilent OpenLAB ECM Enterprise database, rev. 3.3.1 (build 251) or 3.3.2 SP1</li> </ul>	<b>MS SQL Server:</b> <ul style="list-style-type: none"> <li>• MS SQL Server 2005 Standard or Enterprise SP3</li> </ul>

## Software requirements

Microsoft Windows 2003 Server Standard or Enterprise SP2 (32 bit), English (US) Microsoft SQL Server 2005 Standard or Enterprise SP3. Microsoft Business Intelligence Studio (included with SQL server software).

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