

OpenLAB Electronic Lab Notebook (ELN) for Analytical Chemistry

Data Sheet

In an increasingly competitive environment, corporations must capitalize on scientific knowledge and discoveries faster and at reduced cost. Analytical chemistry labs constantly strive to reduce the time it takes to capture, analyze, and report analysis results. Agilent OpenLAB ELN is an easy-to-use, flexible electronic laboratory notebook that saves analysts' valuable time, shortens the path to results, and expedites better-informed decision-making.

- Search, share, and reuse protocols and methods; clone an entire experiment and learn from others
- Queue and track requests for analysis, prompt for approvals, and provide immediate access to status
 and results
- · Integrate workflows with external systems including Scientific Data Management Systems
- · Design templates, tables, and data-entry forms quickly with Dynamic Forms
- Insert files, images, chromatograms, and spectra directly; include searchable annotations
- Import result data from chromatography data systems such as Agilent ChemStation and Waters Empower – using Smart Import
- Collaborate on a single experiment using multiple techniques per sample while maintaining audit trails for each researcher
- · Generate detailed analysis reports across samples or techniques

		E							WELCOME TOBUREN	Debra 19-JUL-20	010			
OpenLAB ELN								S Administration	1 Lock Session	Logout				
OUTCK SEARCH	PEND	PENDING ANALYSES 6 Exp. Found 📲 📕 🧳 🐔 🖨 🚱 🖉 🖄 🗇 🖉 🍰 🐄 .												
GO GO		Exp. Number	Author	Creation Date 🗸	Expected Completion Date	Priority		Sample	Analysis Type	Analysis Status	^			
3 Help Contents		ELN-KO-	ODEA Kathleen	16-JUL-2010 00:44	18-JUL-2010		П е	N+KO-000002.001-52	Impurities Identification Analysis Type 2	To Be Done To Be Done				
🔯 Last Exp.		000003		Generate Analytical Experiment		E E	LN-KO-000002.001-S4	HPLC	To Be Done					
My Exp.		ELN-FB- 000022	BEILLOUIN François	Generate Analytical Experiment into a new Analytical Exp.: into a visiting Experiment: Ure on experiment for all samples			s s	ample456 ample456	Impurities Identification (Impurities Quantification 1 Impurities Identification (Impurities Quantification 1	Completed To Be Done Completed				
Exp. In Review		ELN-FB- 000020	BEILLOUIN François					ample123						
🛣 Exp. To Be Signed 📷 My AR - To Be Sent 📷 My AR - Pending 📸 My AR - Completed				Analysis	Select all Unselect all Analysis Sample 0LC ELN-KO-000002.001-54 PLC PAR-J5-000023-001-55 0LC DRAF-J5-000020-001-55		P P P	AR-JS-000023-001-S2 AR-JS-000023-001-S3 AR-JS-000023-001-S1	HPLC HPLC HPLC	Started Storted Started				
AR - To Be Accepted AR - Accepted AR - Completed Pending Analyses		PAR-35- 000023	SCIENTIST Jim	<u> </u>			р) У Р) У Р)	AR-JS-000023-001-S4 AR-JS-000023-001-S5 AR-JS-000023-001-S6	HPLC Te HPLC Te	Started To Be Done To Be Done				
Selection				<u>ок</u>	Cancel		□ P □ P	AR-JS-000023-001-57 AR-JS-000023+001-58	HPLC HPLC	To Be Done To Be Done				
My Favorites		ELN-FB- 000006	BEILLOUIN François	06-JUL-2010 10:25			s	123	Analysis Type1	Completed				
								XF-DT-000006-001-S1	FACS	To Be Done				
								XF-DT-000006-002-51	FACS	To Be Done				
								XF-DT-000006-003-S1 XF-DT-000006-001-S1	FACS	To Be Done				
		OXF-DT- 000005	TOBUREN Debra	28-JUN-2010 05:23	30-JUN-2010			XF-DT-000006-002-S1	HPLC	To Be Done	~			

Figure 1. The Analytical Request Workflow in OpenLAB ELN lets you manage electronic requests, create sample lists, and queue and prioritize work for analysts – without leaving your desk.



Streamline the analytical process from sample submission to final answers, with the Analytical Request Workflow:

- Eliminate the need to go from lab to lab to submit analysis requests, prioritize samples, track status, or gather results for a final report
- Select samples across requests into a single experiment and link methods, data, and results for any sample, to eliminate transcription errors and minimize the time to check and collate results
- Reduce the time and effort to route documents for approval and report results



Figure 2. Dynamic Forms accelerate record-keeping and ensure that the correct information is consistently captured, as shown in this protocol for impurity detection by LC/MS.

								_					
	Project	Work P.	ackage	Line Item		fanget				836			
Description	External Project	Work P	adkage 4.1	Line Item 4.3	. 💌		<u>×</u>						
Sample Prep.	e Analysis types / Te	chniquee											
	Anely	sis Type *		Technique				Comments					
Analysis	HPLC		M8			Run at calibrat	ion temperature o	f 45deprees					
Report	HPLC		HPLC			Only use reage	int mix from ourtg	omer #45910 as ex	cternal collection				
		444											
	Analysis Ref. / Sau LC-DARDT000033-66	ngle • FLN-KO-000002.0	01-84		Next test		_						
	0.0000000000000000000000000000000000000	· 604-60-000002.0	01.04		THEY, GEL		_						
	Protocol Results	Protocol Results +/-											
	Reagent/Solvent	Volume	Unit	Source									
	Benzene 💌	100 ml		Sigma Aldrich 💌 🕽	(
	Acetonibile 💌	25 µl		Sigma Aldrich 💌 🎾	c								
		At	6		1								
	Semale ID	Weight	Ibut	Weight 2	linit	Brann	America Initials	Date arrenard	1				
	ELN-KO-000002.0	134		145				18-JUL-2010	x				
	PAR-38-000023-0	324							×				
	PAR-35-000023-0	1.2							×				
					u								
				(m	<u>(4)</u>								
	100 10												
	LC Conditio	ins											
	Agilent 1290 Series	binary pump SL, we	Iplate sampler	thermostatied colum	in compartment	inline filter 0.5µm	telween needle :	eat and injector valv	re .				
	e Column	Column	1 💌										
	e Column Temp. ((C)	45.0										
	AND DECEMBER OF A DECEMBER												

Figure 3. The Analytical profile enables researchers to spawn multiple analysis techniques on one or more samples in a single experiment, track sample preparation details, method conditions and results. Reports can be quickly generated across samples or multiple techniques.

Reduce repetitive tasks using Dynamic Forms and Experimental Templates, so analysts can **run more samples per day**:

- Design standard templates so you can quickly and consistently record analytical methods and procedures
- Minimize the amount of time to enter routine data such as equipment, volumes, and reagents, by using pick lists, tables, and check boxes
- Use conditional formatting, calculations, and scripting to enhance data consistency and prompt users for required information

Record and access results faster with Smart Import:

- Import data directly from instrument data systems, includingChemStation, Agilent MassHunter, Empower, and others that store data in an XML format
- Access and import metadata from any file type stored within OpenLAB ECM
- Transfer results directly into predefined Microsoft[®] Excel templates for additional calculations, such as trend analysis or purity checks

Automatically upload result files directly from instruments, configure print-to functionality from any application, and archive experiments into a secure data repository by adding Agilent OpenLAB Enterprise Content Manager (ECM) to your to analytical laboratory data solution. OpenLAB ECM seamlessly integrates with OpenLAB ELN to provide a secure, robust archive for all experimental details and results in your lab.

Dio PAR-DT-000046* Bio	Processing TOBUREN De	bra 05-AUG-2010 16	:42 PDT					Draft			
	Project	Work Package	Line Item	Te	inget			S 🕄 🗟			
 Fermentation Protocol 			<u> </u>	<u> </u>		<u> </u>					
Purification Protocol	Fermentation conditions	Sample prep Plas	mid Informatio	n +/-							
Supporting documents	Description										
 Desults 	 Construct Name 										
C 105415											
<u>•</u>											
	Plasmid General Inform	ation									
	e Status	Plasmid Type	• Strair	1	Antibiotic Marke	ır					
	ок 💌	Cloning Vector	DH240		Amp	-					
	 Vector 	 Comments 									
	MP8	Left of center									
	ORF DNA Seq.	ORF AA Seq.	Sequence Type	Species	Protein Name	cDNA Source	Gene Description	Swiss Prot. Code			
	AAATSCCCGG GGACTGA	`	Light Chain	hamitar		Vertor 12					
					Add						
	Clone Manager	 Constructor 		Designer	e Pl	ate Well loc.					
		± Joe Genomics		Mary Sequencer	A6						
	Batch Information										
	e sate e Concernation e instrumount e Pulfication e Seq. Verified										
	oma ciana a zoo mon a py a kit bisgen a 🕑										
	Register into Corp. 5)	stem Register new	Batch								

Figure 4. Configure the experiment desktop to look the way you want with Experiment Templates. Share and re-use across an organization simplifying data capture for specific experimental processes. Create new chapters and tabs using your terminology to reflect your experimental procedures.

To learn more about OpenLAB ELN, visit us at www.agilent.com/chem/eln

Microsoft is a U.S. registered trademark of Microsoft Corporation.

Information, descriptions, and specifications in this publication are subject to change without notice.

© Agilent Technologies, Inc. 2010 Printed in the USA September 23, 2010 5990-5607EN



Agilent Technologies