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Thermo Scientific Lab Execution System

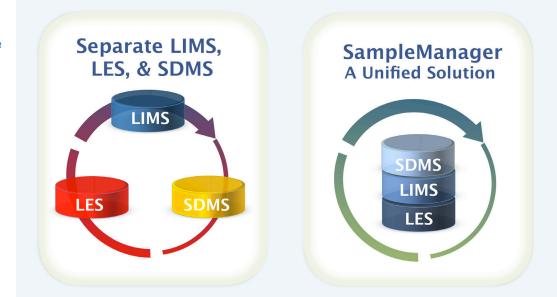
SampleManager LIMS Delivers a Complete Informatics Solution for Method Execution, Laboratory and Data Management

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Thermo Scientific[™] SampleManager[™] LIMS is continuously upgraded to meet the changing needs of industrial and life sciences laboratories. SampleManager 11 delivers:

- Method and SOP Execution
- Scientific Data Management
- Workflow Design
- Lifecycle Workflow
- Instrument Integration
- Dashboards

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A comprehensive data and laboratory management solution like SampleManager LIMS, developed on paperless lab principles, is one of the most critical investments any business can make if they are moving towards a truly integrated and connected enterprise. Addressing the increasing pressures to improve time to market and realize cost savings in QA/QC and analytical labs, the new Thermo Scientific Lab Execution System (LES) gives lab managers complete control to manage their methods and SOPs, without the need to purchase, integrate and validate additional software from multiple vendors. The new LES is web-based, built on and fully integrated with Thermo Scientific SampleManager LIMS, allowing for the LES functionality to be executed from the LIMS or from any web browser. Combined with the instrument integration capabilities of Thermo Scientific Integration Manager[™] and the raw data storage and retrieval capabilities of the company's SDMS (Data Manager[™]), the new LES expands the growing Informatics platform offered by the company, and offers customers the most comprehensive paperless lab solution available today. With the new SampleManager platform of embedded feature-rich capabilities, lab managers and scientists across all industries will be able to achieve full instrument integration, manage their methods and workflow, retrieve and archive any kind of raw scientific data, and export those results across the organization in the format that's required by the recipient.



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 $\textbf{Spain/Portugal} + 34\ 914\ 845\ 965$

United Kingdom +44 1619423000

USA/North America +1 800 395 5467

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that has occurred against an SOP or method and their status.

For more information about SampleManager LIMS and LES. call us at the number closest to you.
email us at marketing.informatics@thermofisher.com, or visit www.thermoscientific.com/SM11

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to guide analysts through the procedure.

SOPs and methods can be broken down into logical steps

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itock S high the c ith DMSO t ontent, as i Vorkin sing volum	Standa compound i to make a appropriat og stan netric and/ into indivi propriate v	1.00 mg/mL (se. Mix well an idard sol or adjustable idual volumeti	on o an ambs <u>ree base</u> s d soricate utions air displac ic flasks o	r glass bottle or volumet tock solution while corre for 5 minutes to dissolve	cting for purity, resi s. Store refrigerated the volumes of each	fual solvents, and water (+4 C). standard indicated in th		Ver traiting the second
forking tandard olution	Vol. Trans. (mL)	Std. Used	Final Vol. (mL)*	Diluent Vol.(mL)**	Working Standard Concentration (ng/mL)	Plasma Standard Concentration (rg/ml.)****		2 - Ansign Stock Information
TD 8	0.250	Stock	5.0	4.750	50,000	5000	Step 2	3 - Equipment Required
TD 7	0,200	Stock	5.0	4.800	40,000	4000	Step 4	Weighing Instructions
D 6	0.125	Stock	5.0	4.675	25,000	2500	6	5 . Tare Balance
TD 5	1.000	STD 8	5.0	4.000	10,000	1000		
	0.250	STD 8	5.0	4.750	2,500	250	Step 0	5 - Enter Weight Results
FD 4	0.250	STD 5	5.0	4.750	500	50.0	Step 7	7 . Enter Servicator Details
		STD 4	5.0	4.800	100	10.0		Review Results
TD 4 TD 3 TD 2	0.200			4,900	50.0	5.00		

Hazard warnings embedded into the SOP remind analysts of necessary safety procedures.

Select Samples		9				Please, follow instructions below Hazards Identification Classifications
	er and drop it here to group by that column			_	_	Flammable Liquid – Category 3 Aspiration Hazard – Category 1 Skin Instation – Category 2
Sample Id	Name					Specific Target Organ Toricity (Single Exposure) - Category 3 Chronic Aquatic Toricity - Category 2
14	JF-14-NOV-2013-000001		Completed	1	×	- Pictograms
15	JF-14-NOV-2013-000002		Available	1	x	
71	JF-5-DEC-2013-000003		Available	1	×	
12	JF-5-DEC-2013-000004		Completed	1	x	
13	JF-5-DEC-2013-000005		Available	1	x	【!><匙>
74	JF-5-DEC-2013-000006		Available	1	x	
					4 - 6 ol 6 Iar	Signal Word : Danger Hazard Statements : Farmable laud and vecor hephon by mode. Cause side inflate. Repeate our paraloged built of the site of the si
rocess History						
t Fuel process ex	ecuted by user System Manager on 2/12/201	1 5:51:26 PM				
· Start action by	user System Manager on 2/12/2014 5:54:10 Process executed by user System Manager on 2	I PM				

Process history provides a detailed description of every activity

Instructions and illustrations demonstrate proper analytical techniques.

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Jet Fuel Process Select S	amples Prepare Samples			
Please, follow instructions be	low			
ubide of the fuel analysis lab. eep a fully stocked Spill Kit near eep fine extinguishers nearby in ent the fine alarm located inside insure that all appropriate signer neare that the fame hord is no.	propriate Protective Personal Equipment by Im a designated location known to all a designated location known to all shop the fuels analysis lab on a regular basis or is placed in the fuel analysis lab inclu	shop personnel. personnel Ing: Emergency Phone Numbers, Fire Bill, "Empty th	er mostent detting genere, erd mer i net honi. Smare fur hone in tiltett bange Cantener' enne dar, Emergene Dar Hanh kor	van when colecting cample
1 have completed i	my preparation			
Process History				6
	user System Manager on 2/12,			
	stem Manager on 2/12/2014 5:	14:18 PM		
 Jet Fuel Process 	executed by user System Manage item Menager on 2/12/2014 5:			

Training records and instrument calibration records ensure that only trained analysts and calibrated instrumentation is used.

Jet Fuel Process	Select Samples	Prepare Samples	Check Operator Training	Assign Instrument	Flash Point Testing	Prepare Instrument			
Please, follow instr	uctions below								
Preparatio	n of Appa	ratus (Mar	iual)						
				ide in a draft-free room o	r compartment, surround	the tester on three sides i	by the shield for protection from drafts. T	ests are not to be made in a laboratory draft hood	or near
1	B T								
Fire			i i						
Natural gas and bot	bed gas flame and ele	actric ignitors have be	en found acceptable for use as	the ignition source. (We	arning-Gas pressure su	pplied to the apparatus m	must not be allowed to enceed 3 kPa (12 in) of water pressure.)	
For flash points be	low 13°C (55°F) or	above 60°C (140°F)	use as a bath liquid a 1 + 1 m	ature of water and ethyl	lene glycol (Warning—Et	nylene Glycol—Poison, H	Harm- ful or tatal if swallowed. Vapor harm!	ul. Avoid contact with skin.) For flash points between	13°C
(1944)	repared the instrume								
rocess History									6
			2/12/2014 6:02:18 PM						
Start artico h	user System Ma	- 	014 5-54-18 PM						
 Jet Fuel i 	Process executed	by user System M	anaper on 2/12/2014 5:	54:20 PM					
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