ReviewSheet for MassHunter Quant

User Manual

Developer	niels@waleson.eu
Web-page	https://waleson.eu/reviewsheet

Purpose

High-throughput reviewing and reporting Highly customizable Excel like sheets (Excel is not required)



Installation

Download the latest version from https://waleson.eu/reviewsheet Execute the setup program Open MassHunter Quant

Enable the Add-In

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File Home		View	Method		Tools		Help	
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Find the ReviewSheet menu

	Agilent MassHunter Quantitative Analysis (for GCMS and LCMS) - VOA - VolatileOrganics-niels.batch.bin							? —	— ×
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Click ReviewSheet

	Agilent MassHun	? — 🗆 🗙		
File	Home	View Method	Tools Help	
다 New Batch [^ [†]] Open Batch		Quantitate ~ Clear Results	Open Report Folder Library Search Results Queue Viewer Library Search Reports 🗸	ReviewSheet
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🛛 Sample: 🔨 CAL_L	.10 .	Sample Type: <all></all>	Compound: 1,1-Dichloro-1-propene	Quechers Control Report v1_0
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User mode and designer mode

Enter designer

Design and save templates

ReviewSheet - 3.23 - Expired 2024-08-31 - Spread									
File	Report	Fast Ana	alyze!	Help	_				
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	Open								
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	Training								

Switch to user mode

Use templates to review quantitation results

EviewSheet - 3.23 - Expired 2024-08-31 - Spread										
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6										

Predefined tables

Create a single sample sheet

Sample header

Select A1 and click: Insert tables - Per sample - Header

	ReviewSh	ieet -	3.23 - Expire	d 2024-08-31	- Spread					
Fil	le	Hom	e Inser	t Page	Layout	Formulas	Data	View	Developer	Settings
Sele	ct	Hid	e if error E	Batch 👻	Compour	nds to clipboard	Define re	port Currer	nt sample / com	pound -
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1	HIDE		HIDE							
2			DataFileNa	a File	CAL_L10.D	I				
3			SampleNa	r Sample	CAL_L10					
4			SampleTyp	Туре	Calibration	ı				
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6	_		AcqDateTi	r Acquired	2008-06-20) 22:19:23				
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10									_	

Table of compounds Select A11 and click: Insert tables - Per sample - Table

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Sele	tt	Hid	e if error	Batch 👻	Compour	nds to clipboar	d Define rep	ort Current	sample / com	pound -	Sheet header
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	A11	~	$\mathbf{i} \times \mathbf{v}$	Graphics	Insert a	single samp	le table for a	all compound	ls		
	А		В	Calibratio	י <u>ר</u>	E	F	G	Н	I	J
1	HIDE		HIDE								
2			DataFile	Na File	CAL_L10.D						
3			SampleN	lar Sample	CAL_L10						
4			SampleT	ур Туре	Calibration	ı					
5			SampleIr	nfc Info							
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8											
9				+ 110 Scall C. 2 x10 6 - 0 6 - 5 - 4 - 3 - 2 - 1 -			9 10 11	12 13 14 1	15 16 17 1	8 19 20 2	1 22 23 24
10											
11	HIDE			CAL L10.D	Compound	d ISTD.Comp	RetentionT	PEAK.Reter	PEAK.Targe	ISTD.PEAK.	PEAK.Final
12				Compound	Туре	ISTD	RT Exp	RT Act	Resp	IS Resp	FConc
13				1,1-Dichlor	Target	Fluorobenz	10.100	10.091	1666597	1310216	29.2986
14				Dichlorodif	Target	Fluorobenz	4.249	4.248	2199968	1310216	29.6742
15				Chloromet	Target	Fluorobenz	4.493	4.488	1208596	1310216	29.4181
16				1.4 Dichlor	Targot	1.4 Dichlor	10 520	10 5/10	20/6512	607000	20 2206

Adjust the width of columns C and E

Double click between the header cell C and D, and between E and F

Columns and rows, that start with HIDE, will be hidden in User mode.

Conditional format



1	PEAK.Targe
:	Resp
	1666597
	2199968
	1208596
	2946512
	1633393
	1810801
	987678
	789578
	2884908
	1630235
	2773495
	890094
	1693047

Save and use template



The rows and columns started with HIDE, are hidden

Select another sample in MassHunter, the values are updated on the sheet

Select an cell related to a different compound on the sheet, MassHunter navigates to that compound Perform a manual integration in MassHunter, the sheets shows the new response

Functions

There are 400+ functions equivalent to Excel (without requiring Excel) ReviewSheet adds about 20 functions

There are 3 values set by MassHunter

MH.FirstDataFileName	The first data filename in the batch
MH.DataFileName	The data filename of the currently selected sample
MH.CompoundName	The compound name of the currently selected compound

The 3 basic functions to retrieve values from MassHunter are

MH.Batch	Get values from the batch, like BatchName
MH.Sample	Get values from a sample, like SampleName
MH.Compound	Get values from a compound, like FinalConcentration

Examples

=MH.Batch("BatchName")

=MH.Sample("SampleName", MH.DataFileName)

=MH.Compound("Peak.FinalConcentration", MH.DataFileName, MH.CompoundName)

	А	В	
1	Formula	Value	
2	=MH.FirstDataFileName	CAL_L03.D	
3	=MH.DataFileName	SAMPLE05.D	
4	=MH.CompoundName	Carbon Disulfide	
5	=MH.Batch("BatchName")	VolatileOrganics-niels.batch.bin	
6	=MH.Sample("SampleName", MH.DataFileName)	SAMPLE05	
7	=MH.Compound("Peak.FinalConcentration",MH.DataFileName,MH.CompoundName)	18.57	

Field names

Functions	ames Logbook
[X] Peak	. ISTD. Sample. Level.
Q1. Q2.	Copy to clipboard
Refresh	X
Table	Field
Peak	BaselineEnd
Peak	Baseline EndOriginal
Peak	BaselineStandardDeviation
Peak	BaselineStart
Peak	BaselineStartOriginal
Peak	BatchID
Peak	CalculatedConcentration
Peak	CapacityFactor
Peak	CCISTDResponseRatio
Peak	CCResponseRatio
Peak	CompoundID
Peak	EstimatedConcentration
Peak	FinalConcentration
Peak	FullWidthHalfMaximum
Peak	GroupNumber
Peak	Height

More functions

Functions	Names Logbook	
[X] =	Copy to clipboard	
Refresh) [
Туре	Name	
Value	MH.CompoundName	
Value	MH.DataFileName	
Value	MH.FirstDataFileName	
Function	MH.AllCompounds	
Function	MH.AllLevels	
Function	MH.Batch	
Function	MH.Compound	
Function	MH.Compounds	
Function	MH.HidelfBlank	
Function	MH.HidelfError	
Function	MH.HidelfFalse	
Function	MH.Level	
Function	MH.Levels	
Function	MH.RepeatCells	
Function	MH.Sample	
Function	MH.Samples	
Function	MH.SheetName	
Function	MH.ShowlfTrue	
Function	MH.TemplateName	
Function	MH.VSearch	
Visual	VF.Calibration	
Visual	VF.Compound	
Visual	VF.Sample	

X

Visual functions

VF.Sample VF.Compound VF.Calibration

Array functions

MH.Samples MH.Compounds MH.Levels MH.AllCompounds MH.AllLevels

Hide functions

MH.ShowIfTrue MH.HideIfFalse MH.HideIfBlank MH.HideIfError

Information functions

MH.SheetName MH.TemplateName

Formatting functions MH.RepeatCells

Special functions

MH.VSearch MH.ByRowByColumn

MH.Batch

=MH.Batch(<Returned field>)

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File	Home	Insert	Pag	je Layout	Formulas	Data	View	De	eveloper	Settings	Massl	lunter				
	Hide if erro	or Batch +		Compounds to	o clipboard	Define report	Current	sample	e / compound	+ Shee	et headers	V Na	avigate	Fast Analyze	License	:
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B	2 🗸	$\times \checkmark f_{\mathbf{x}}$	=mh.batch	ו(^
	A	В	С	D	E	F	G		Functions N	lames Logbo	ook					
1									[X] Peak	. ISTD.	Sample.	Level.	Q1.	Q2. Copy to c	lipboard	
2	=	mh.batch(Refresh							X
3		MH.Batch(Re	turned fi	ield)					Table	Field				Value		1
4		() Analysis	s Time Stamp					Batch	AnalysisTim	eStamp			2019-06-	19 01:4	
5		(.) Analyst	Name OursetVersion					Batch	AnalystNam	e			L\niels		11
6		() Analyze) ApplyM	ultiplierISTD					Batch	AnalyzeQua	ntVersion			10.2		
-		(.) ApplyM	ultiplierMatrixSpil	ke				Batch	ApplyMultipl	ierISTD			False		
· ·		() ApplyM	ultiplierSurrogate	•				Batch	ApplyMultipl	ierMatrixSpike	;		True		
8		(.) ApplyM	ultiplierTarget					Batch	ApplyMultipl	ierSurrogate			True		
9		(.) Audit Tr	ail Nata Dath Cila Mara	_				Batch	ApplyMultipl	ierTarget			True		
10		(.) BatchD	lane	e	_			Batch	Audit Trail				False		
11		() BatchS	tate					Batch	BatchDataP	PathFileName			D:\Mass	Hunter\	
11		(.) Bracket	tingType					Batch	BatchName				VolatileO	rganics	
12									Batch	BatchState				Processe	ed	
13									Batch	BracketingT	уре			None		
14									Batch	CalibrationL	astUpdatedTi	meStamp		2019-06-	19 01:4	

	Α	В	С	D	
1					
2		VolatileOrg	anics-niels.	batch.bin	
3					

Use the Substitute() function to remove '.batch.bin' Just like in Excel

	B2 ∨	$X \checkmark f_X$	= <mark>SUBSTITU</mark>	TE(MH.Batch("	BatchName"), <mark>"</mark>	.batch.bin","")
	А	В	С	D	E	F
1						
2		VolatileOrg	anics-niels			

In this manual, the field names will be separated like this:

	А	В	С	D	
1	HIDE	HIDE			
2		BatchName	Batch	VolatileOrganics-niels	
3		AnalysisTimeStamp	Analyzed	2019-06-19 01:45	
4		AnalystName	Analist	=MH.Batch(B4)	
-					

The field names are in the B column (Try double click on the field name in the Names tab) The C column contains the user friendly name.

The HIDE keyword will hide the columns and rows in User Mode.

=MH.Sample(<Returned field>, <data filename>)

Cell D2 contains =MH.DataFileName

This variable contains the data filename of the currently selected sample in MassHunter

	D2 ~	🗄 🗙 🗸 🏂 =MH.DataF	ileName				
	А	В	С	D	E	F	
1	HIDE	HIDE					
2		DataFileName	File	CAL_L03.D			
3		SampleName	Sample	CAL_L03			
4		SampleType	Туре	Calibration			
5		SampleInformation	Info				
6		AcqDateTime	Acquired	2008-06-20	17:53:12		
7		AcqMethodFileName	Method	624A.M			

The formula in D3 uses the data filename in D2 to retrieve the sample name as specified in cell B3 The \$ prefix works as in Excel, see

https://www.microsoft.com/en-us/microsoft-365/blog/2011/08/17/making-sense-of-dollar-signs-in-excel

	Α	В	С	D	E	F
1	HIDE	HIDE				
2		DataFileName	File	CAL_L03.D		I
3		SampleName	Sample	=MH.Sampl	e(B3,\$D\$2)	
4		SampleType	Туре	Calibration		
5		SampleInformation	Info			
6		AcqDateTime	Acquired	2008-06-20	17:53:12	
7		AcqMethodFileName	Method	624A.M		

Available field names are listed in the Names tab

Functions N	ames Logbook	
[X] Peak	. ISTD. Sample. Level. Q1. Q2.	Copy to clipboard
Refresh		
Table	Field	Value
Sample	AcqDateTime	2008-06-20 17:5
Sample	AcqDateTimeLocal	
Sample	AcqMethodFileName	624A.M
Sample	AcqMethodPathName	
Sample	AcqOperator	clemens
Sample	BalanceOverride	
Sample	Barcode	
Sample	BatchID	0
Sample	Calibration Reference Sample ID	0
Sample	Comment	080620STD03,V
Sample	Completed	True
Sample	DADateTime	2019-06-19 01:4
Sample	DAMethodFileName	VOA.quantmetho
Sample	DAMethodPathName	D:\MassHunter\
Sample	DataFileName	CAL_L03.D
Sample	DataPathName	D:\MassHunter\
Sample	Dilution	1
Sample	DualInjector	
Sample	DualInjectorAcqDateTime	
Sample	DualInjectorBarcode	
Sample	DualInjectorExpectedBarcode	
Sample	DualInjectorVial	
Sample	DualInjectorVolume	
Sample	EquilibrationTime	0
Sample	ExpectedBarcode	
Sample	GraphicSampleChromatogram	
Sample	InjectionsPerPosition	
Sample	InjectorVolume	0
Sample	InstrumentName	HP5973F
Sample	Instrument Type	SingleQuadrunole

MH.Compound

	В	С	D	E
1	HIDE			
2	HIDE	CAL_L03.D	CompoundType	PEAK.TargetResponse
3		Compound	Туре	Resp
4		Fluorobenzene	ISTD	=MH.Compound(E\$2,\$C\$2,\$C4)
5		1,1-Dichloro-1-propene	Target	19619
6		Dichlorodifluoromethane	Target	33895
7		chi	×	10537

=MH.Compound(<Returned field>, <data filename>)

De formula is E4 use the data filename in C2 (it is the data file of the currently selected sample in MassHunter). And it uses the compound name in C4 and the field name in E2.

The \$ prefix allows the formula to be copied down or right while maintaining the desired cell references.

The name in C4 could be the currently selected compound in MassHunter: =MH.CompoundName, but here we use a fixed list of compound names. It is probably the easiest way to develop a sample report.

If new compounds are added to the MassHunter method, select the currently compound list on the template, and click 'Compounds to clipboard' to get a list of the missing compounds.



To get peak values for the compound, use the PEAK. Prefix like in cell E2 (see the first image on this page) There are more prefixes, and they can be chained for example like this: Compound functions

PEAK.TargetResponse, main (green) peak of the compound

ISTD.PEAK.TargetResponse, corresponding ISTD peak

Q1. RelativeResponse, first qualifier

Q1.PEAK.OutlierQualifierOutOfLimits, first qualifier peak

BLANK.PEAK.TargetResponse, corresponding peak of previous BLANK

QC.PEAK.TargetResponse, corresponding peak of previous QC

QC.QC.PEAK.TargetResponse, corresponding peak of 2x previous QC

QC.ISTD.PEAK.TargetResponse, corresponding ISTD peak of previous QC

LEVEL, corresponding level for calibration sample compound

PREV, previous sample or compound on previous sample

CALIBRATION, previous calibration sample

CC, previous continues calibration

CALREF, The calref sample contains the levels for calculating the concentration. Only 1 of the samples in the batch contains the levels. But when bracketing is used, more samples contain levels. With the CALREF prefix this sample can be addressed.

Visual functions

VF.Sample

=VF.SAMPLE(B2,FALSE)



VF.Compound

=VF.Compound(<data filename>, <compound name>, <overlay>, <hide axis>)

	B 5	~ : × <i>✓ 1</i>	VF.COMPOUND(B2	2,B3,FALSE,TRUE)	
	Α	В	С	D	1
1					
2		SAMPLE03.D			
3		Toluene-D8			
4					
5		13.16	i\$ min.		
6			Á		
7					
8					

Cells B5:C8 are merged and contain formula =VF.Compound(B2,B3,False,True)

VF.Calibration

=VF.CALIBRATION(<data filename>, <compound name>, <hide axis>)



Array functions

MH.Samples

=MH.Samples(<Sort Fields>, <Criteria 1 field>,<Criteria 1 comparator>,<Criteria 1 value>, ...)

Cell B3 contains a formula that spills multiple values down to B7

	B3	✓ : × ✓ f	🐮 =MH.Samples("AcqD)ateTime","SampleType	","=",\$B\$2)
	А	В	С	D	E
1					
2		Sample			
3		SAMPLE01.D			
4		SAMPLE02.D			
5		SAMPLE03.D			
6		SAMPLE04.D			
7		SAMPLE05.D			

The list is ordered by AcqDateTime The list is limited to SampleType=Sample (B7)

Because B4 is spilled down, de function in C4 can also spill down by the # appendix.

The # suffix works as in Excel, see

https://support.microsoft.com/en-us/office/dynamic-array-formulas-and-spilled-array-behavior-205c6b06-03ba-4151-89a1-87a7eb36e531

	C4 : X fx =MH.Sample(C\$3,\$B4#)								
	А	В	C C						
1	HIDE								
2		Sample	Acquired						
3	HIDE	Sample	AcqDateTime						
4		SAMPLE01.D	=MH.Sample(C\$3,\$B4#)						
5		SAMPLE02.D	2008-06-21 03:22						
6		SAMPLE03.D	2008-06-21 04:00						
7		SAMPLE04.D	2008-06-21 04:38						
8		SAMPLE05.D	2008-06-21 05:16						
9									

Static array

Or reserve a large enough range of cells for the array in B4 to accommodate all the samples in future larger batches. Then click Stat Arrays - Fit selection

ReviewSheet - 3.23 - Expired 2024-08-31 - Book1									
File Home Inser			ert P	Page La	yout Fo	ormulas	Data		
Selec	t	Hid	le if error	Batch +		Compounds	to clipboard	Define	repc
Fit d	ata	Hid	le if blank	Per sampl	e -			Define	d rep
Fit se	election	Sho	ow if true	Per compound +					
Statio	: Arrays	Sh	ow Hide	Insert t	ables	Util	ities		
B4 V I MH.Samples("AcqDateTime","SampleType","=",\$B\$3)									
	А			3		С	D		
1	HIDE								
2			Sample		Acquired				
3	HIDE		Sample		AcqDa	teTime			
4			SAMPLE	01.D	2008-0	6-21 02:44			
5			SAMPLE)2.D	2008-06-21 03:22				
6			SAMPLE)3.D	2008-06-21 04:00				
7			SAMPLE	04.D	2008-0	6-21 04:38			
8			SAMPLE)5.D	2008-0	6-21 05:16			
9			#N/A						
10	#N/A								
11			#N/A						
12			#N/A						
13									
14									

And click Show Hide – Hide if error

ReviewSheet - 3.23 - Expired 2024-08-31 - Book1										
File Hom		Hom	ie Ins	ert F		age Layout		Fo	Formula	
Sele	đ	Hid	le if error	Bat	ch –		Compo	ounds	to clip	
Fit d	ata	Hid	le if blank	Per	sampl	e -				
Fit s	election	Sho	ow if true	Per	compo	ound +				
Stati	c Arrays	Sh	<mark>ow Hid</mark> e	In	sert t	ables		Util	ties	
	B4	\sim	i × v	fx	=MH.S	Gamples('	'AcqDate	Time"	"Samp	
	Α		ŀ	В		С				
1	HIDE									
2			Sample			Acquir	ed			
3	HIDE		Sample			AcqDa	teTime	2		
4	SHOW		SAMPLE	1.D 2008-06-21		6-21 02	2:44			
5	SHOW		SAMPLE	02.D	2.D 2008-06-21 03		3:22			
6	SHOW		SAMPLE	3.D 2008-06-21		6-21 04	1:00			
7	SHOW		SAMPLE	04.D 2008-06		06-21 04:38				
8	SHOW		SAMPLE	05.D		2008-06-21 05:16		5: 16		
9	HIDE		#N/A							
10	HIDE		#N/A							
11	HIDE		#N/A							
12	HIDE		#N/A							
10	12									

Column A cells contain a formula that return HIDE if a B column cell contains an error. In User mode, the rows with the HIDE will be hidden. The sheet is now independent of the number of samples in the batch.

MH.Compounds

=MH.Compounds(<Sort Fields>, <DataFileName>, <Criteria 1 field>,<Criteria 1 comparator>,<Criteria 1 value>, ...)

This function returns a list of compound names for the sample with the specified data filename.

MH.AllCompounds

=MH.Compounds(<Sort Fields>, <DataFileName>, <Criteria 1 field>,<Criteria 1 comparator>,<Criteria 1 value>, ...)

Returns an array of data filename and compound names that fulfill the criteria In the example below, all compounds in just the samples that have a final concentration of more than 50 are shown.

	B4 v i x v fx =MH.AllCompounds(,,"SAMPLE.SampleType","=","Sample","Peak.FinalConcentration",">",\$B\$3)						
	А	В	С	D	E		
1	HIDE						
2		Data file	Compound	Conc			
3	HIDE	50	PEAK.F	inalConcentration			
4		SAMPLE02.D	Chloroethane	60.86			
5		SAMPLE05.D	1,2,4-Trimethylbenzene	146.24			
6		SAMPLE05.D	1,3,5-Trimethylbenzene	65.09			
7		SAMPLE05.D	2-Butanone (MEK)	137.62			
8		SAMPLE05.D	Benzene	69.20			
9		SAMPLE05.D	Ethylbenzene	225.78			
10		SAMPLE05.D	M&P-Xylenes	343.13			
11		SAMPLE05.D	Naphthalene	160.34			
12		SAMPLE05.D	O-Xylene	224.10			
13		SAMPLE05.D	Tetrahydrofuran	937.35			
14		SAMPLE05.D	Toluene	713.83			
15		SAMPLE05.D	trans-1,3-Dichloropropene	82.09			
16		SAMPLE05.D	Vinyl Acetate	111.40			

The formula in B4

=MH.AllCompounds(,,"SAMPLE.SampleType","=","Sample","Peak.FinalConcentration",">",\$B\$3)

The formula in D4

=MH.Compound(D\$3,CHOOSECOLS(\$B4#,1),CHOOSECOLS(\$B4#,2))

Additional values

Peak.CalculatedConcentrationByHighestLevel Concentration calculated by the linear regression with only the highest calid calibration point Peak.FinalConcentrationByHighestLevel Final concentration calculated by the linear regression with only the highest calid calibration point Peak.QualifiersPassed Count of passed qualifiers Peak.QualifiersFailed Count of failed qualifiers

Level.ResidualConcentration Absolute difference of theoretical concentration and actual concentration on a level

Compound.MaximumResidualConcentration Highest residual concentration of any of the levels

Compound.LowestLevelConcentration Compound.HighestLevelConcentration Compound.HighestLevelResponse Compound.LowestLevelResponse The highest or lowest of any of the levels, regardless of calibration type, validity and enabled

Compound.HighestCurveConcentration Compound.LowestCurveConcentration Compound.HighestCurveResponse Compound.LowestCurveResponse The highest or lowest of the enabled, and valid calibration levels

Compound.CurveA Compound.CurveB Compound.CurveC Curve formula values: axx + bx + c

Named functions

Like in Excel, it is possible to add named functions. Example, with an exponential curve like this.



Response above the curve would result in infinite concentration. And MassHunter reports an empty value. ReviewSheet added values: PEAK.AboveCurve and PEAK.CalculatedConcentrationByHighestLevel The Response Factor of highest valid calibration point is used to calculate the concentration

🧱 ReviewSheet - 3.40 - Expired 2024-08-31 - D:\MassHunter\ReviewSheet\ByRowAndColumn.xml									
File Home Insert Page Layout Formulas Data View Developer Settings MassHunter									
fx Insert Function	O O O ate Lookup & Math More ime → Reference → & Trig → Functions →	Name Define Manager Name	frace Precedents frace Dependents 🌈 Show Formulas Remove Arrows 👻	Calculate Now Calculation Calculate Sheet Options +					
Function Libra	ary	Defined Names	Formula Auditing	Calculation					
X22 V X X =MH.ByRowAndCo	Column(B6#,C5#,LAMBDA(f,c,Conc(f,c)))								
Name Manager					×				
New Edit Delete					<u>Filter</u>				
Name Value Refer	rs to Scope	Comment							
Conc- {} =LAM	MBDA(f,c,IFS(MH.Compound Workbook								
MH.DataFileName {} ="SA	AMPLE03.D" Workbook								
Image: MH.FirstDataFileName {} ="CA	AL_L03.D" Workbook								
Refere to:									
× ✓ =LAMBDA∉,c,IFS(MH.Compound("Peak.Abo	oveCurve",f,c)=TRUE,MH.Compound("Peak.C	CalculatedConcentrationBy	HighestLevel",f,c),TRUE,MH.Compound("I	Peak.CalculatedConcentration",f,c))) =					
					Close				

	X24 ~	$\times \checkmark fx$	=MH.ByRov	vAndColumn(I	B6#,C5#,LAN	IBDA(f,c,Con	c(f,c)))
		W	Х	Y	Z	AA	AB
3		1-Methylethylbenzene	2-Butanone (MEK)	2-Hexanone	2-Methoxy-2-methylpropane	4-Chlorotrifluorotoluene	4-Isopropyltoluene
20	SAMPLE01.D	0.2691	0.0699	1.1783			0.7
21	SAMPLE02.D	0.2785	0.1276	1.2295	0.5707	0.0008	0.6
22	SAMPLE03.D	0.2691	0.0979	1.1251		0.0006	
23	SAMPLE04.D	0.2674	0.1291	1.2410		0.0008	
24	SAMPLE05.D	32.8801	14.6800	1.0510	0.6106	0.0008	2.4

Batch Table

	Sample: 🔨 SAMPL	.E05	• ~	Sample 1	Type: <all></all>		
Sample			2-Butano		2	-But	anone (MEK)
	Nam	ie	Exp. Conc.	RT	Resp.	MI	Calc. Conc.
	SAMPLE01			8.476	8680		0.0699
	SAMPLE02			8.476	10788	\Box	0.1276
	SAMPLE03			8.460	8735		0.0979
	SAMPLE04			8.465	9437	\Box	0.1291
►	SAMPLE05			8.476	52957		1

ByRow, ByCol, MH.ByRowAndColumn

When designing at template, check the logbook for calculation time. It is important to stay below 1000ms for the calculation time when navigating to a different compounds or samples.

Functions and also Named Function (like in the previous page) can be fed with Arrays as parameter(s). Depending on the function, each cell might calculate the whole result array again, which can be an enormous waste of time or even feels like a lockup. Make use ByRow and ByCol function like in Excel to prevent this behavior. See

https://support.microsoft.com/en-us/office/byrow-function-2e04c677-78c8-4e6b-8c10-a4602f2602bb

For tables of samples and compounds, ReviewSheet contains a function MH.ByRowAndColumn

	C6 V I X V fx =MH.ByRowAndColumn(B6#,C5#,LAMBDA(f,c,Conc(f,c)))							
	А	В	С	D	E	F	G	
1	HIDE							
2								
3	HIDE		1,1,1-Trich	1,1,2,2-Tetr	1,1,2-Trich	1,1-Dichlor	1,1-Dichlor	
4	HIDE		Target	Target	Target	Target	Target	
5			1,1,1-Trich	1,1,2,2-Tetr	1,1,2-Trich	1,1-Dichlor	1,1-Dichlo	
6		CAL_LO3.D	=MH.ByRow	/AndColumr	n(B6#,C5#,LA	MBDA(f,c,C	onc(f,c)))	
7		CAL_LO4.D	0.088593	0.077274	0.081443	0.093247	0.085737	
8		CAL_L05.D	0.185688	0.172173	0.188944	0.194014	0.174843	
9		CAL_LO6.D	0.46008	0.581655	0.512448	0.5	0.4442	
10		CAL_L07.D	1.008077	0.941615	0.948072	1.14333	0.943447	

=MH.ByRowAndColumn(B6#,C5#,LAMBDA(f,c,Conc(f,c)))