

Agilent Infinity Lab LC Series Vialsampler Vial Drawer Configuration in Empower Environment

Technical Note

Technical Guide for the vial drawer configuration and setup of the G7129A/B/C Vialsampler with Waters Empower.

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Introduction

The G7129A/B/C Vialsampler and the G7157A Preparative Autosampler offer two kinds of vial drawers, one with numeric location assignment and a new one with alphanumeric (cartesian) location assignment. The alphanumeric vial drawer requires additional configuration steps in Empower environment.

Waters Corporation's implementation of the Agilent Instrument Control Framework (ICF) for their Empower data system is called Waters ICF Support. The Waters ICF Support is part of the Waters Instrument Control Package (ICS).

This guide describes how to configure the alphanumeric vial drawer in an Empower environment.

Waters ICF support version introducing support for vialsamplers	Agilent ICF Agilent LC driver	Supported vialsamplers
Waters ICF Support v3.0 With ICF A.02.05 update P/N 667005815	A.02.05 A.02.17	G7129C 1260 Infinity II Vialsampler
Waters ICF Support v2.2 With ICF A.02.04 update P/N 667004815	A.02.04 A.02.14	G7157A 1260 Infinity II Preparative Autosampler
Waters ICF Support v2.2 P/N 667005450	A.02.03 DU2 A.02.13	G7129B 1290 Infinity II Vialsampler G7129A 1260 Infinity II Vialsampler

Table 1 Supported scenarios

NOTE

Ensure that all Agilent LC modules in the LC system meet at least the minimum firmware requirements as specified by the 3rd party CDS software vendor and meet Agilent's firmware set/firmware interoperability requirements. Agilent recommends installing the latest available firmware set.

https://www.agilent.com/en-us/firmwareDownload?whid=69761

Offered Vial Drawers for Vialsamplers

Starting with the Infinity II Vialsamplers, a new addressing schema for vials is available, like the wellplate schema.

- The classic schema uses continuous numbering, for example: Vial 3
- The *new* schema uses alphanumeric positions, for example: P2-A1, which translates in Empower to 2:A1

See below the available vial drawers along with their sample capacity and their addressing in Empower.

Part No.	Description	Addressing in Empower
G7129-68210	Classic vial drawer kit (left and right drawer each 50 vials)	Continuously numbered vial positions: 1-50, second drawer from 51-100
G7129-60210 Classic drawer for 50 x 2 mL vial (left)		-
G7129-60220	Classic drawer for 50 x 2 mL vial (right)	-
G7129-60010	Drawer for 66 x 6 mL vials	Continuously numbered alphanumeric vial
G7129-60110	Drawer for 18 x 6 mL vials (Default configuration for the G7157A)	position: 1;A,1 Note: These vial drawers require a new plate definition file.
G7129-60000	External tray for 5 x 2 ml Vials	201-206

Table 2 Vial drawer addressing in Empower

NOTE

As the new schema is like the wellplate handling, you need to import a plate definition file into Empower in order to use these new vial drawers with alphanumeric assignment.

Prerequisites/Compatibility Information

For general software requirements such as operating systems refer to the Waters Empower documentation.

The Agilent InfinityLab LC Series Vialsamplers User Manual outlines the requirements for the Vialsamplers:

https://www.agilent.com/cs/library/usermanuals/Public/G7129ABUser.pdf

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Location Addressing in Empower

- 1 In order to start a single run or to set up a sequence, enter the vial location.
- **2** For the Vialsamplers it makes a difference if a numeric or an alphanumeric vial drawer is used. Make sure to use the vial drawers and start locations described in Table 2 on page 2.
 - **a** Numeric setup screen: No additional action required.

	E	Vial	lnj Vol (uL)	# of Injs	Label	SampleName
	1	1	10,0	1		test1
l	2	2	10,0	1		test2
	3	3	10,0	1		test3
l	4	4	10,0	1		test4

Figure 1 Numeric set up screen

b Alphanumeric setup screen: Click **Edit > Plates** to select the new vial drawer.

	Define Plates For Sample Set Method							
_	2730 Layout [Create New Plate Type]							
-		Ē	Plate Type Name	Plate Layout Position				
-		1	vialsampler 66x2ml	1				
-								
-								

Figure 2 Alphanumeric setup screen

1							
	13	Tray/Vial	lnj Vol (uL)	# of Injs	Label	SampleName	
	1	1:A,1	2,0	1		test 5	
	2	1:A,2	2,0	1		test 6	
	3	1:A,3	2,0	1		test 7	
	4	1:A,4	2,0	1		test 8	
_							

Figure 3 Alphanumeric setup screen

In order to use new Agilent alphanumeric vial drawers in conjunction with Empower 3 and a Vialsampler, the alphanumeric vial drawers need to be available in the plate definitions folder from Empower. These steps outline the procedure for importing new Agilent wellplate definition files into Empower.

NOTE

The plate definition files are part of the Waters ICF support package, and can be found in the **AgilentPlatesForImport** folder or obtained via the Waters support. Note that in the ICF upgrade packages for plain driver updates these files are not included.

- 1 Open the Configuration Manager.
- 2 In the **Configuration Manager** window, select **Plate Types** in the navigation panel to display the current list of available wellplate types you can use within Empower.
- **3** Check if the new Agilent alphanumeric vial drawer is present. In this example, the plates are not available.

🖶 System/Administrator - Configuration Manager							
File Edit View Records Tools Help							
🏂 💁 🔗 💉 🗴 🖻 🖬 🗖 🗾 Filter By:							
Empower 3 Configuration	E	Plate Type Name					
Projects	1	24 uCfuge tube, 1.5mL					
	2	24 vial (open access), 2mL					
	3	384 well, 80uL					
eCord	4	48 uCfuge tube, 0.5mL					
🖉 Users	5	48 vial holder, 2mL					
Ser Groups	6	96 well (tall), 1mL					
Plate Types	7	96 well (tall), 2mL					
System Audit Trail	8	96 well (tall), 350uL					
😽 Offline System Audit Trail	9	96 well w/700uL insert					
	10	96 well, 300 uL					
	11	ANSI-24Tube1.5mLHolder					
	12	ANSI-24Vial4mLHolder					
	13	ANSI-384well100uL					
	14	ANSI-384well250uL					
	15	ANSI-48Tube0.65mLHolder					
	16	ANSI-48Vial2mLHolder					
	17	ANSI-96well1mL					
	18	ANSI-96well1mLGlassInsert					
	19	ANSI-96well2mL					
	20	ANSI-96well350uL					
	21	ANSI-96well700uLGlassInsert					

Figure 4 Plate types in Waters Empower Configuration Editor

4 Right-click an empty row of the **Plate Type Name** table to open the context menu.

5 Select Import from Text.

🖶 System/Administrator - Configuration Manager					
File Edit View Records Tools Help					
🧆 🖥 🛃 💉 🔏 🖿 🖻			Filter By: Default		
Empower 3 Configuration	È	Plate Type Na	ime		
Projects	1	24 uCfuge tube, 1.5	mL		
Systems	2	24 vial (open acces	s), 2mL		
	3	384 well, 80uL			
eCord	4	48 uCfuge tube, 0.5	mL		
🖉 Users	5	48 vial holder, 2mL			
User Groups	6	96 well (tall), 1mL			
Plate Types	7	96 well (tall), 2mL			
System Audit Trail	8	96 well (tall), 350uL			
📲 Offline System Audit Trail	9	96 well w/700uL ins	sert		
	10	96 well, 300 uL			
	11	ANSI-24Tube1.5m	New		
	12	ANSI-24Vial4mLH	Delete		
	13	ANSI-384well100	Export to Text		
	14	ANSI-384 well250	Import from Text		
	15	ANSI-48Tube0.65	Properties		
	16	ANSI-48Vial2mLH	Сору		
	17	ANSI-96well1mL	Hide Column		
	18	ANSI-96well1mLG	Flide Column		
	19	ANSI-96well2mL	Show All Columns		
	20	ANSI-96well350ul	Print Table		
	21	ANSI-96well700ul	Table Properties		
			Column Properties		
	\vdash				

Figure 5 Configuration of the LC

The Import Plate Type From Text File dialog opens.

6 Click **Browse** and navigate to the **Agilent Plates for Import** folder on the CD. Alternatively, if you requested the files via Waters support, navigate to the location the files were downloaded to.

7 Select the dimension file and click **OK** to import. See Table 2 on page 2 for valid dimension files.



Figure 6 Plate type import file

8 Provide a meaningful name as **New Plate Type Name** for identification among the other plate types.

Import Plate Type From Text File	×					
Waters can import a plate type definition from a text file. Browse to or type in the path and name of the plate type file, then enter the desired name of the new plate type definition.						
Plate Type Definition Import File: Browse						
C:\Users\locAdmin\Desktop\import vial tray\66x2ml-Vials.txt						
New Plate Type Name: vialsampler 66x2m(
OK Cancel]					

Figure 7 Import dialog

9 The newly imported plate for the Vialsampler is now available among the plate types for Empower.

System/Administrator - Configuration Manager					
File Edit View Records Tools Help					
🥦 🖥 💣 🗶 🔏 🖻 🖻		Filter By			
Empower 3 Configuration	Ē	Plate Type Name			
Projects	1	24 uCfuge tube, 1.5mL			
	2	24 vial (open access), 2mL			
	3	384 well, 80uL			
	4	48 uCfuge tube, 0.5mL			
🖉 Users	5	48 vial holder, 2mL			
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Plate Types	7	96 well (tall), 2mL			
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	10	96 well, 300 uL			
	11	ANSI-24Tube1.5mLHolder			
	12	ANSI-24Vial4mLHolder			
	13	ANSI-384well100uL			
	14	ANSI-384well250uL			
	15	ANSI-48Tube0.65mLHolder			
	16	ANSI-48Vial2mLHolder			
	17	ANSI-96well1mL			
	18	ANSI-96well1mLGlassInsert			
	19	ANSI-96well2mL			
	20	ANSI-96well350uL			
	21	ANSI-96well700uLGlassInsert			
	22	vialsampler 66x2ml			

Figure 8 Configuration Manager

References

References

Agilent InfinityLab LC Series Vialsampler User Manual: https://www.agilent.com/cs/library/usermanuals/Public/G7129ABUser.pdf

Appendix

Appendix

If you need to define the plate type manually, see below for the dimensions for the 66x2mL drawer.

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Plate Type 'vialsampler 66x2ml' Properties

		Plate Rows and Plate Type Name vialsam Format XY	Columns Refere	
		Plate Dimensions X 200,00 Well Dimensions Top Left Well Location	- mm Y 76,00 - mm X 8.00	Height 43,00 Y 8,00
		Well Size	Diameter 11,00 Cancel	Depth 23,00 Help

Figure 9 Plate type properties

Plate Rows and Columns Referencing							
Row	Row and Column Dimensions - mm						
	Number Spacing						
Ro	ws	6	12,00				
Col	umns	11	18,00				
Row	and Colu	mn Offsets - mm					
		None	Offset	_			
Roy	w Offset:	Odd Even	0.00				
		 None 	Offset - mr	n			
Col	umn Offse	et: Odd	0,00				
		O Even					
C	ж	Cancel		Help			

Figure 10 Plate type properties – Rows and Columns

Plate Rows and Columns Referencing			
Origin			
Origin:	Top Left	C Top Right	
	O Bottom Left	O Bottom Rig	ht
Scheme			
Referencing:	⊙ XY	C Sequential	
Horizontal:	○ A B C	● 123	
Vertical:	• ABC	○ 123	
Sequential Continuous			
Horizontal First Priority			
Terminology			
Plate Tray			
Well Vial			-
ОК	Cancel		Help

Figure 11 Plate type properties – Referencing

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