

## Adding an Average Blank or Titer Calculation - tiamo

This document guides you in creating a method to take the average of (n) number of runs, as in blank or titer determinations.

Technology: Titration

## Procedure to Create

- 1. In tiamo, open your Titer or Blank method (Method > File > Open)
- 2. Double click on the 'START/Main track' command



- 3. Enable 'Statistics'
- 4. Set the 'Number of single determinations' you wish to average (minimum of 3 is

recommended for most applications)

	Command name Main track	
General	Application note Method variables	
Workplac	e view	
Our Cur	rrent view	
O Vie	w 💌	
	Live display 1 Main track   Live display 2 Main track	
Statis	itics Number of single determinations	
	ang tomatic conditioning	

- 5. Click OK to exit
- 6. Double click on the 'CALC/Calculations' command



- 7. Ensure you have calculation programmed for the titer/blank value of a single run
  - a. Please note that the calculation for titer/blank shown here does not necessarily represent an actual titer/blank calculation.



8. Double click on the Result name to ensure Statistics is enabled (shown by check mark under Statistics column here)

		Command name	Calculations						
1	Result name	Formula	Ur	nit	Decimal places	Assignment	Statistics	Result monitoring	
1	Titer	= 'DET pH.EP{1}.VOL'			2	RS01			
									I
-	New	Properties Delete	Tem	nlate					_
	TVEVV	Propercies		ipiace:	·				

- 9. Create a new calculation by clicking the New button as seen above
- 10. Name your result something representative such as "Avg Titer" or "Avg Blank" (disable statistics for this calculation)
- 11. Double click the formula editor
- 12. Use the tree menu for variables to locate "Results" and expand this menu. Choose the folder for the name of your first result (in this case "Titer/blank" and choose the variable MNV and click add. The formula editor screen should resemble this:

C Formula editor	<b>X</b>
RS.Titer.MN∨'	
+-×/ ^ =><<><=>=	
Command variables	Operators     Genetic Constructions
	👁 🥥 Miscellaneous
── □ Titer	
	Description
	RS.'Result name'.MNV
- NST	Mann unline for the second
- OVF	Mean value for the result.
Add	OK Cancel

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- 13. Click OK to accept the changes
- 14. Click the 'Options' tab of the Avg Titer/Blank result
  - a. Here you can select the option "Save result as titer" or "Save result as common variable". If you choose "Save result as titer" you will be asked to choose a solution to save it for. Remember your available solutions can be found under the Configuration Screen. This data will be written to the data chip of the associated dosing unit or exchange unit. If you do not have an intelligent dosing unit or exchange unit. If you do not have an intelligent dosing unit or exchange unit, OR the chip is defective, the best option is to save the result as a common variable. Before being able to choose this option you will have to create a Common Variable. To do this go to the configuration screen, locate the common variables sub screen and click Edit > New.

	Monitoring Options	
Save r	esult as common variable	
	Common variable AgNO3 Titer	-
Save r	esult as titer	
	Solution name 0.1M Na2EDTA	-
Save r	esult as global variable	
	Globel variable	-

- 15. Click OK to save the new calculation
- 16. Save your method (File > Save)



## Procedure to Use Titer/Common Variable as Part of a Calculation

• To add Titer value from the Solutions list, use the following variable in your formula editor:

S Formula editor					
'DET pH.TITER'					
+-×/ ^ =><<>=>=					
	Operators/Functions				
	<ul> <li>Operators</li> <li>Functions</li> <li>Omega</li> <li>Omega</li> <li>Omega</li> <li>Miscellaneous</li> </ul>				
	Description				
SME STE DSC EME ETE SVA CYL	'Command name'. TITER Titer value of the solution used for the command.				
Add	OK Cancel				



• To add the titer/blank value from Common Variables, use the following in your formula editor:



## Other Ideas

'Submit a request' for further assistance from Metrohm Technical Support at

support.metrohmusa.com.