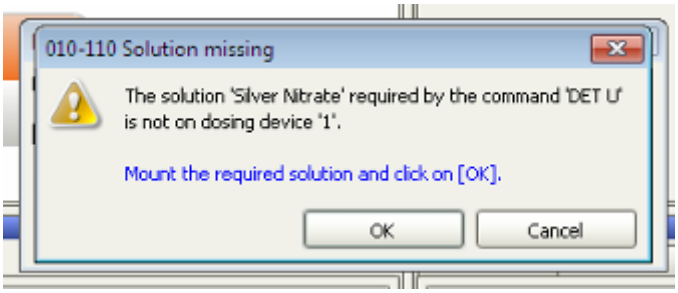
“Solution missing” Error - tiamo

This help note describes how to correct ‘solution missing’ error in tiamo software.

Technology: Titration

How do you know you have this problem?

Due to one of two possibilities, you have encountered the following error:



What can I try to resolve it?

The way to find the source of the error is to check your Configuration > Titrants/Solutions:

Titrants/Solutions

	Solution name	Concentration	Cylinder volume	Type	Dosing device	Titer	Date titer det.	Ne
1	acetate buffer	1 mol/L	50	IDU	859_2 / D2	1 mol/L	2013-08-15 09:2...	
2	Al(NO3)	0.445 mol/L	20	IDU	859_2 / D1	0.445 mol/L	2013-08-15 09:1...	
3	ammonium sulfate	1 mol/L	20	IDU		1 mol/L	2013-07-10 09:4...	
4	Comp 5	1.0 mol/L	10	IDU		5.4 mol/L	2013-04-22 12:5...	
5	hexadecylpyridini...	0.02 mol/L	20	IDU		0.02	2013-03-25 13:0...	20
6	Hydrochloric Acid	0.1 mol/L	2	IDU		5.02 mg/g	2012-05-30 14:5...	
7	NaOH	1 mol/L	20	IDU		1 mol/L	2013-07-01 11:1...	
8	Perchloric	0.1 mol/L	50	IDU		1	2013-05-31 10:5...	
9	Perchloric Acid	0.1 mol/L	20	IDU	907_2 / D1	0.1	2013-07-15 12:2...	
10	Silver Nitrate	0.141 mol/L	20	IDU	907_2 / D2	0.141	2013-07-08 12:0...	
11	TSI	1 M	20	IDU		1 M	2013-01-10 13:2...	
12	Water	1.000 mol/L	5	IDU		1.000	2013-02-14 16:2...	

- IMPORTANT – On line 10, we have a solution named “Silver Nitrate”.
    - ‘Type’ in 4th column: IDU
        - This means solution is on Intelligent Dosing Unit, i.e. a dosing unit with data chip. This could also say IEU which stands for Intelligent Exchange Unit.

- ‘Dosing device’ in 5th column: 907_2/D2
  - This means the dosing unit is currently connected to device 907_2 on MSB port 2.

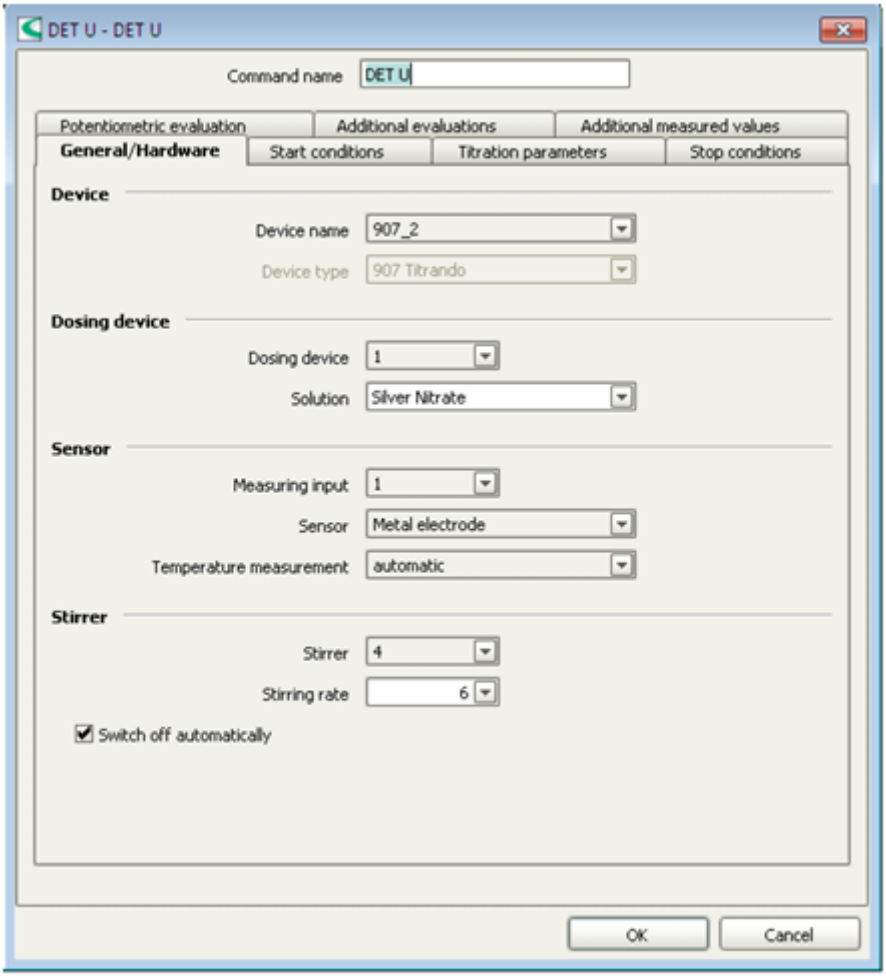
If your solution is being actively recognized and read, i.e. there is an entry in the ‘Dosing device’ column in Titrants/Solutions, continue with **Scenario 1.**

If your solution is NOT being actively recognized and read, i.e. there is NOT an entry in the ‘Dosing device’ column in Titrants/Solutions, continue with **Scenario 2.**

Scenario 1

The cause of this error is a discrepancy between how your titrator is configured (physical connection of dosing device) and how the method is programmed.

1. Click Method tab
2. Click File > Open – select the method you’re trying to run showing error
3. Double click on the command causing this error
   a. In this example, the command name is ‘DET U’ per the error message on page 1



- IMPORTANT – Under 'Dosing device' section, Dosing device 1 is programmed for Solution 'Silver Nitrate'. We know from Configuration > Titrants/Solutions, Silver Nitrate is on dosing device 2 (907_2/D2).

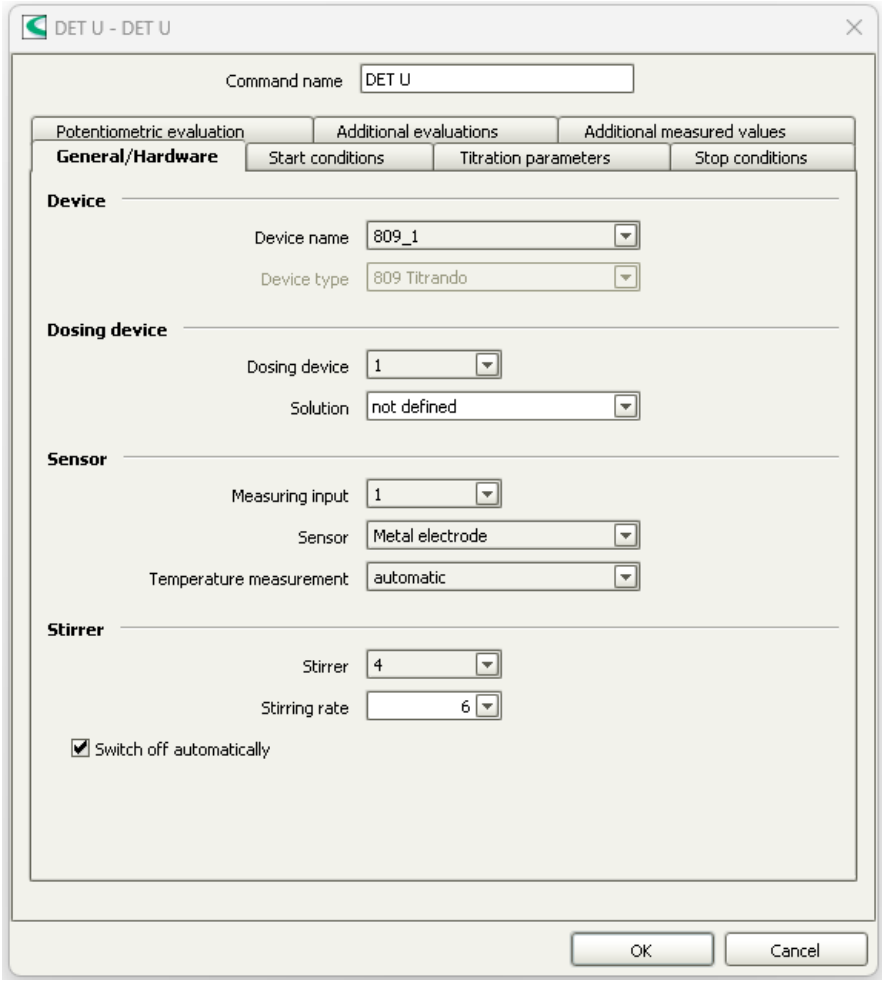
4. Update the method – changing dosing device designation from 1 to 2
5. Click OK, then File > Save to save changes made to method
6. Alternatively, you can change the physical connection of the dosing device to the titrator – moving dosing device cable from MSB port 2 to MSB port 1
   (Note: Exit tiamo software before disconnecting dosing devices from titrator)

Scenario 2

The cause of this error is the dosing unit or exchange unit is not properly communicating with the titrator; likely due to faulty data chip.

To overcome, we have two options:

1. ‘Submit a request’ for further assistance from Metrohm Technical Support at support.metrohmusa.com – requesting assistance with procuring a new data chip
2. Program your method to run with Solution: ‘not defined’
    a. Click Method tab
    b. Click File > Open – select the method you’re trying to run showing error
    c. Double click on the command causing this error
        i. In this example, the command name is ‘DET U’ per the error message on page 1
    d. Confirm physical connection of dosing device to rear of titrator (i.e. MSB port number connection)
    e. Ensure ‘Dosing device’ number programmed in method matches connection to MSB port number on rear of titrator
    f. Use drop down menu under ‘Solution’ to select ‘not defined’



g. Click OK, then File > Save to save changes made to method

Other Ideas

To remove defective data chip:

- The dosing unit chip resides on the top facing portion of the dosing unit

- Remove dosing unit housing from cylinder/distributor (press button above “Vent” and rotate counterclockwise)
- Using your finger, push up on underside of data chip from the inside of the housing

‘Submit a request’ for further assistance from Metrohm Technical Support at support.metrohmusa.com.