

RPA455 / RPA455x / RPA455xx

Smart Paint Scales

For PC Software of
"Formula Management"



METTLER TOLEDO

Contents

1.	Communication Settings	2
1.1.	Serial Communication	2
1.1.1.	Set on the PC Software	2
1.1.2.	Set on the Scale	3
1.2.	Ethernet Communication	4
1.2.1.	Connect to the Network with DHCP	4
1.2.2.	Connect to the Network with a Fixed IP Address	5
2.	Formula Management	9
2.1.	Formula Library	9
2.2.	Ingredient Library	10
2.3.	Working Formulas	11
2.4.	Writing Formulas to the Scale	12
2.5.	Reading Formulas from the Scale.....	13
3.	More Functions	13
3.1.	Scale Setup	13
3.2.	Scale Calibration.....	14
3.3.	Auxiliary Display	15

Change Notice:


Data (MM/DD/YYYY)	Changes	Revision
12/10/2019	Initial Launch	A

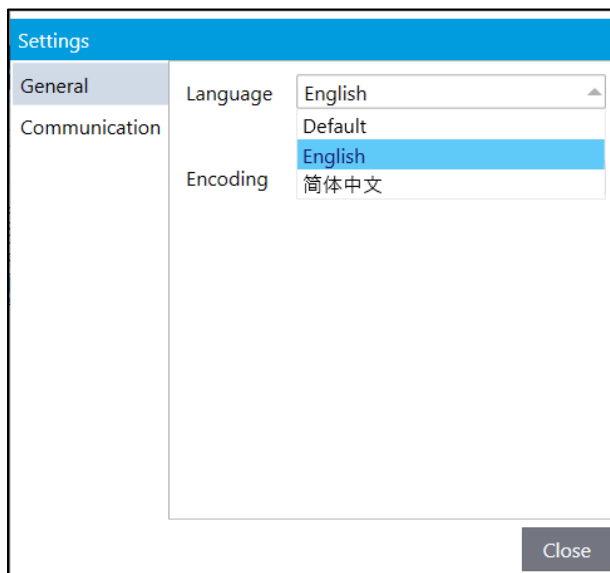
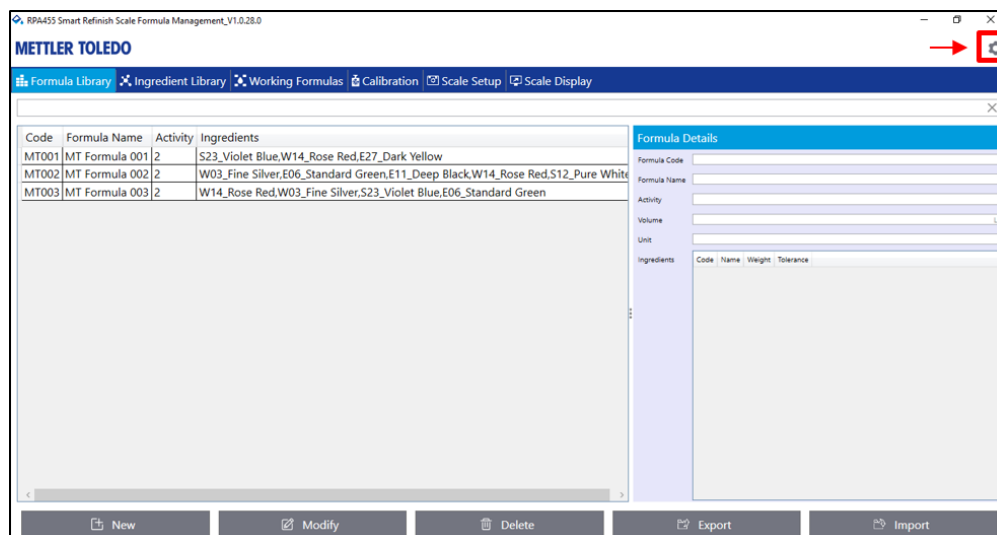
1. Communication Settings

1.1. Serial Communication

Set the serial communication parameters on both the PC software and the scale.

1.1.1. Set on the PC Software




1. Run the software and click , then "General" to choose your language and click "Close".



2. Choose "COM" as the port type. Recommended settings are with baud rate of 9600, data bits of 8, parity of none, stop bits of 1.

Settings	
General	Port Type <input checked="" type="radio"/> COM <input type="radio"/> Net
Communication	Com Port <input type="text" value="COM4"/>
	Baudrate <input type="text" value="9600"/>
	DataBits <input type="text" value="8"/>
	Parity <input type="text" value="None"/>
	StopBits <input type="text" value="1"/>
	Comm Retries <input type="text" value="3"/>
	Comm Timeout <input type="text" value="10"/> Seconds
Close	

1.1.2. Set on the Scale

1. Press  on the scale, then "Communication".
2. Choose "RS232" and press  to edit.
3. Use the same serial parameter that set on the PC software in 1.1.1.
4. Press  to save the communication parameters with the scale.

Menu Setting	
Scale	RS232 2/4
Calibration	Baud DataBits Parity Stop
Terminal	4800 7 Odd 1
Communi..	9600 8 None 1
Maintena..	19200 2
<input type="button" value="←"/> <input checked="" type="button" value="✓"/> <input type="button" value="→"/>	

Note: Set the same serial communication parameters on both the PC software and the scale, if it does not match, the communication will fail. Recommended settings are with Baud rate of 9600, Data Bits of 8, Parity of None, Stop Bits of 1.


1.2. Ethernet Communication

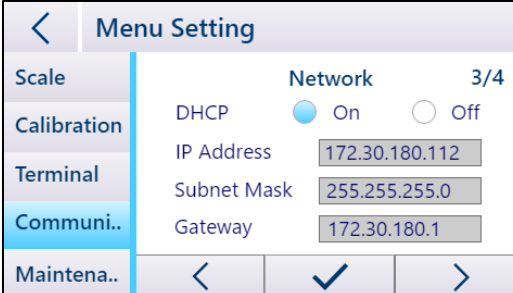
Take Win10 as an example; there are two options to connect to the network, which are with fixed IP address and with DHCP.

1.2.1. Connect to the Network with DHCP

1.2.1.1. Configure Network on the Scale

If the IP address on the network is assigned by a DHCP (Dynamic Host Configuration Protocol) server, do as follows to assign an IP address to the scale:

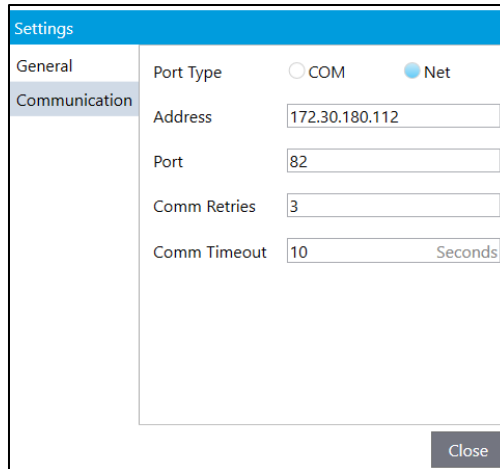
1. Press  on the scale, then "Communication".
2. In the "Network" screen, select DHCP as "On".



3. Press to confirm, and then press on the upper left corner to save the change.
4. Then the DHCP server automatically assigns the scale with an IP address.

1.2.1.2. Configure Network on the PC Software

1. Choose "Net" as communication port type.
2. Enter the same IP address that set on the scale in 1.2.1.1.
3. Click "Close" to finish the setting.



The image shows a 'Settings' dialog box with a 'Communication' tab selected. The 'Port Type' is set to 'Net'. The 'Address' field contains '172.30.180.112', the 'Port' field contains '82', the 'Comm Retries' field contains '3', and the 'Comm Timeout' field contains '10' with the unit 'Seconds' next to it. A 'Close' button is located at the bottom right.

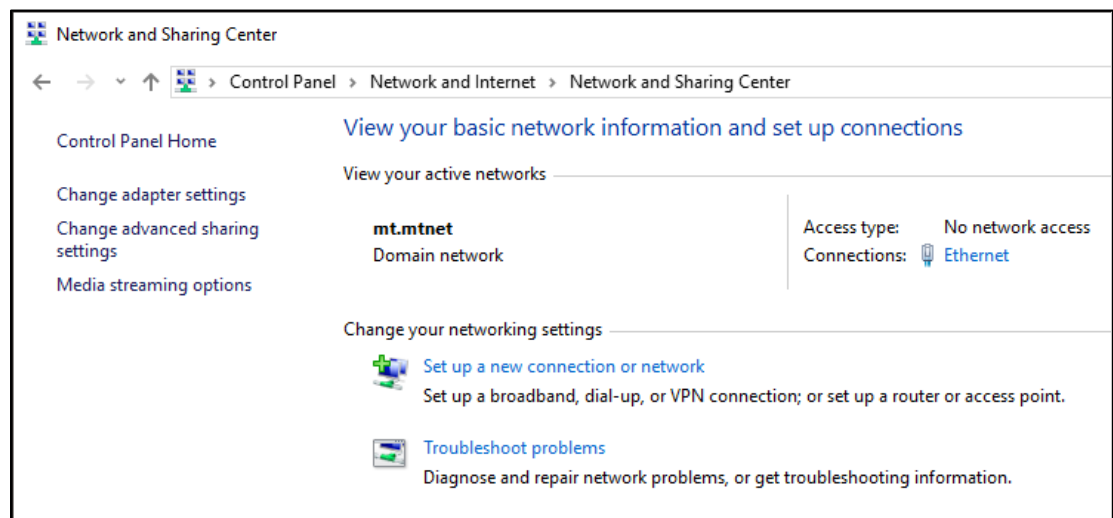
Field	Value
Port Type	Net
Address	172.30.180.112
Port	82
Comm Retries	3
Comm Timeout	10 Seconds

1.2.2. Connect to the Network with a Fixed IP Address

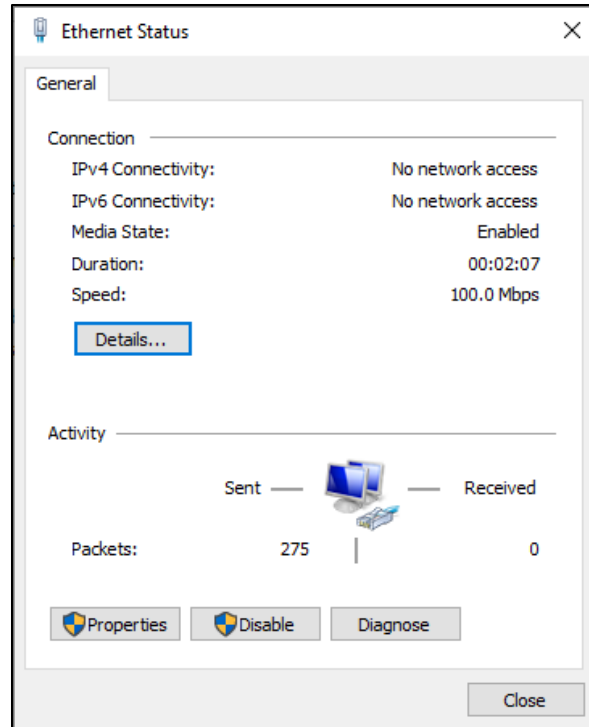
1.2.2.1. Configure Network on the PC

To connect the scale to the network with a fixed IP addressed, do as follows:

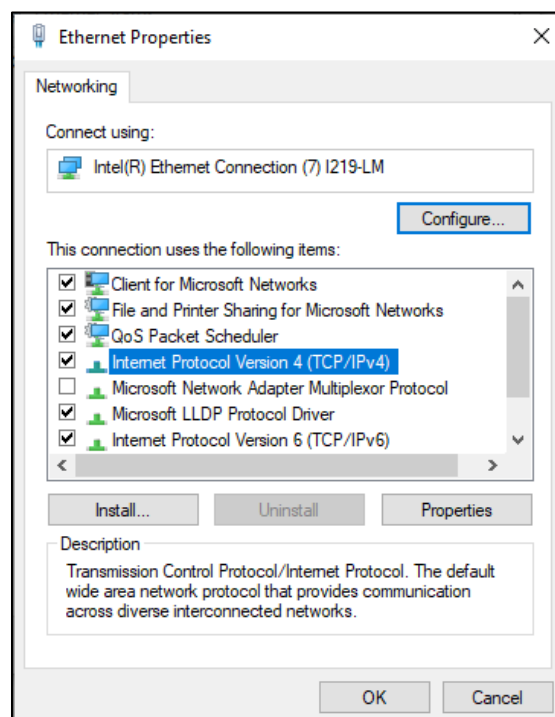
1. Open the "Network and Sharing Center" (Start > Control Panel > Network and Internet > Network and Sharing Center) on your Windows PC.



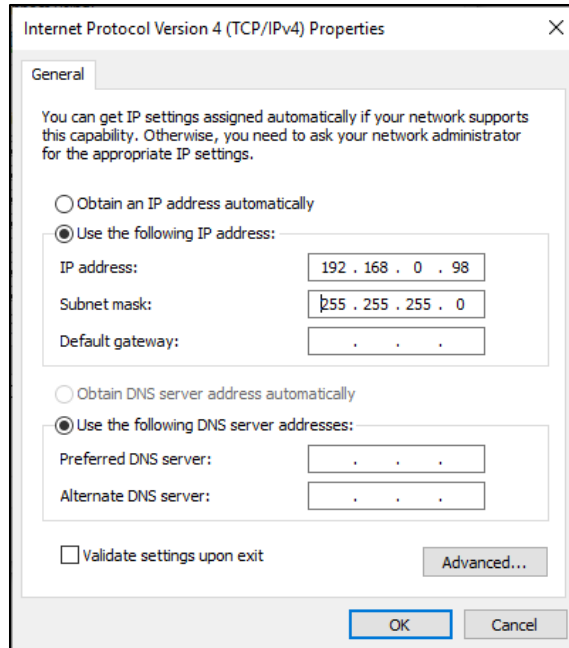
2. Click "Ethernet" connection in "Network and Sharing Center" window.
3. Click "Properties" in "Ethernet Status" window.



4. Select "Internet Protocol Version 4 (TCP/IPv4)" in "Ethernet Properties" window.




5. Select "Use the following IP address"; enter the IP address of the network connection, then click "OK" to confirm.




6. Click "OK" to close the following window.

1.2.2.2. Configure Network on the Scale

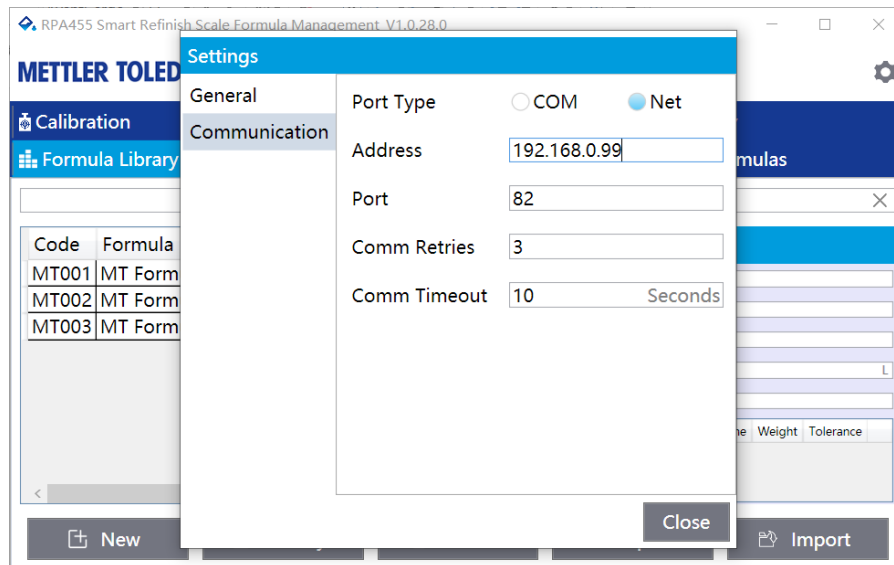
1. Press  on the scale, then "Communication".
2. In the "Network" screen, select DHCP as "Off".



3. Enter the IP address and Subnet Mask and Make sure:
 - To use an IP address from the same address space as the Windows PC (Subnet Mask).
 - Not to use the same IP address as the Windows PC.
4. Press  then press on the upper left corner to save the changes.

NOTE: The IP address assigned for the scale should be in the same network segment as the Windows PC.

1.2.2.3. Configure Network on the PC Software



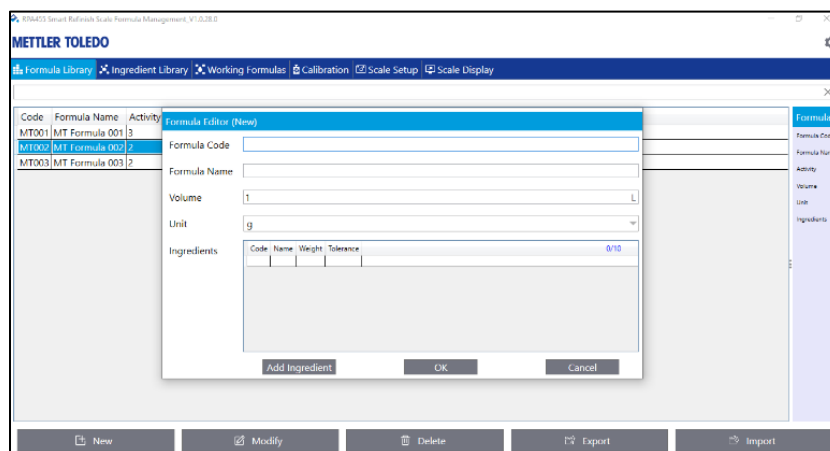
1. Choose "Net" as communication port type.
2. Enter the same IP address that set on the scale in 1.2.2.2.
3. Press "Close" to finish the setting.

2. Formula Management

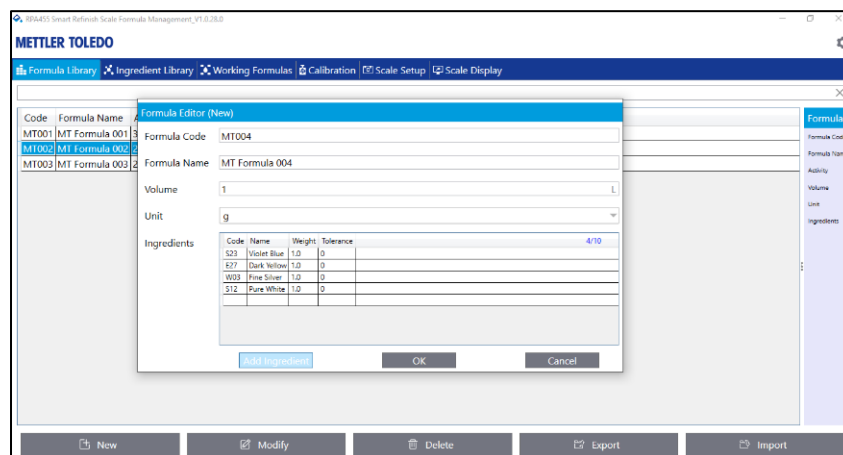
2.1. Formula Library

Formula library is available to manage formulas and ingredients from the PC software and the scale.

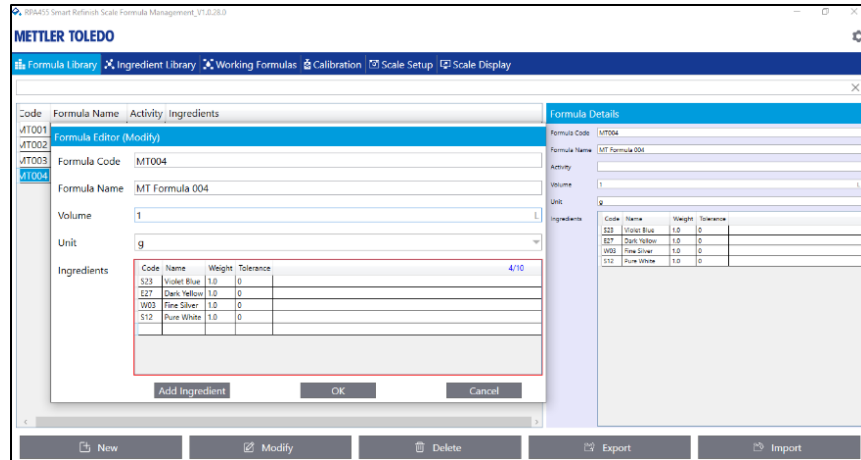
1. Click "**New**" to create new formula.



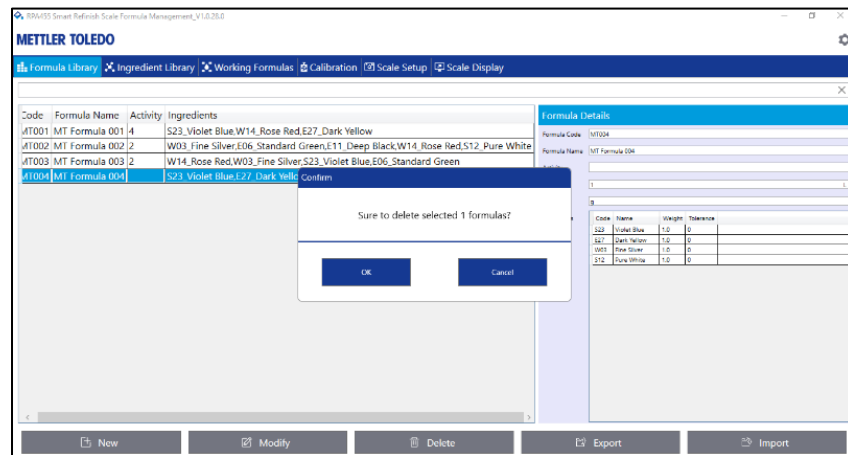
2. Click "**Add Ingredient**" to add ingredients then click "**OK**". For more details, please refer to the ingredient Library in chapter 2.2.



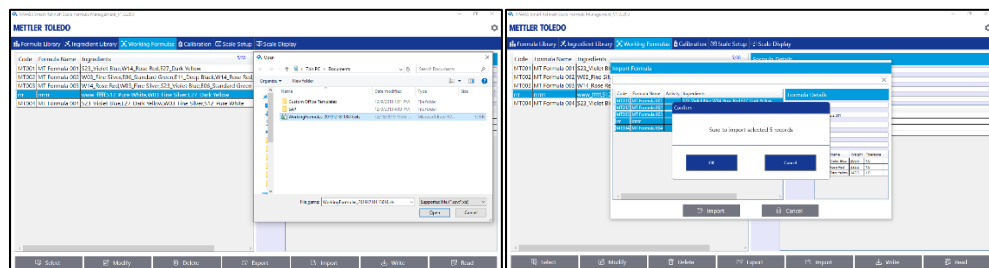
3. Click "**Modify**" to change details or to add more ingredients.



4. Click **"Delete"** to exclude the selected formula then click **"OK"**.



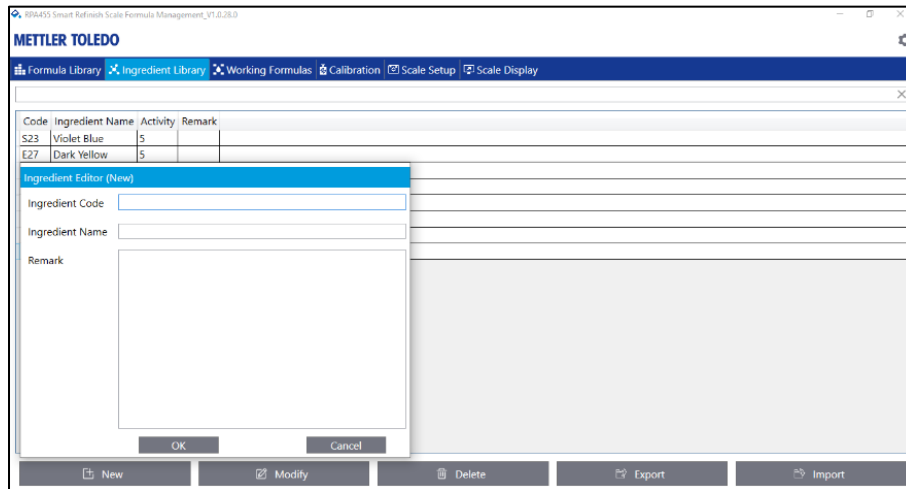
5. Click **"Export"** to create a *.xls document.
6. Click **"Import"** to upload a *.csv/.xls file.



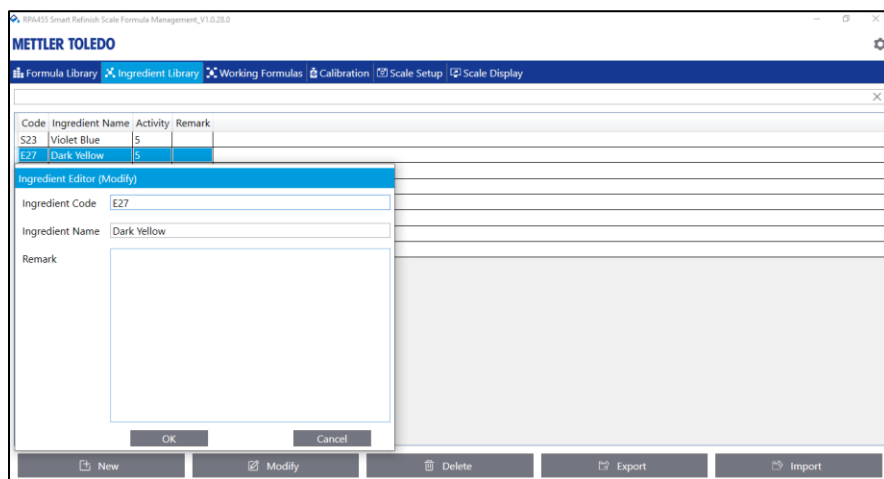
2.2. Ingredient Library

The ingredient library is to pre-save the ingredients to the PC software, which includes the ingredient code and name. Whenever you create a formula, you can take use of it.

1. Click **"Add"** to add an ingredient, then click **"OK"**.



2. Click **"Modify"** to change an ingredient detail then click **"OK"**.

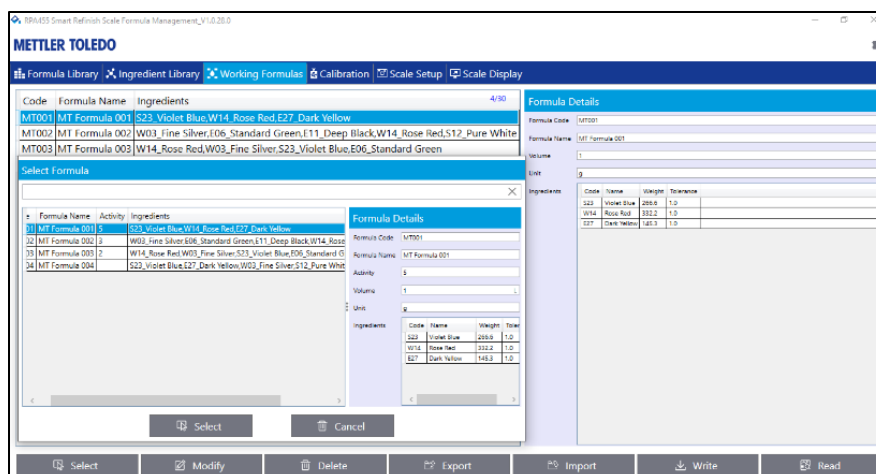


3. Click **"Delete"** to exclude an ingredient then click **"OK"**.
4. Click **"Export"** to create a .xls document.
5. Click **"Import"** to upload a .csv/.xls file.

2.3. Working Formulas

The application of 'working formulas' is to write the formulas into the scale from the PC software. It is also possible to modify, delete, export and import files from Working Library.

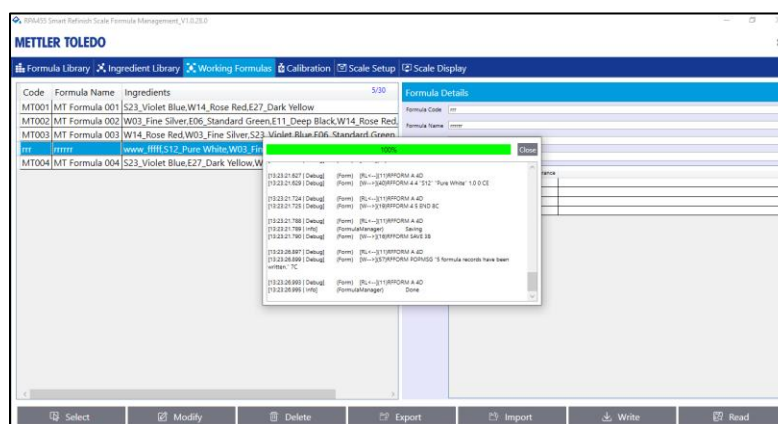
1. Click **"Select"** to choose the formulas that you want to write into scale.



2. Click **"Modify"** to change details or to add new ingredients, then click **"OK"**.
3. Click **"Delete"** to exclude formulas, then click **"OK"**.
4. Click **"Export"** to create a .xls document.
5. Click **"Import"** to upload a .csv/.xls file.
6. Click **"Write"** to send formula data to scale.
7. Click **"Read"** to upload the formula included on the scale.

2.4. Writing Formulas to the Scale

1. Click **"Working Formulas"**.
2. Click **"Write"** to send the formulas to the scale.

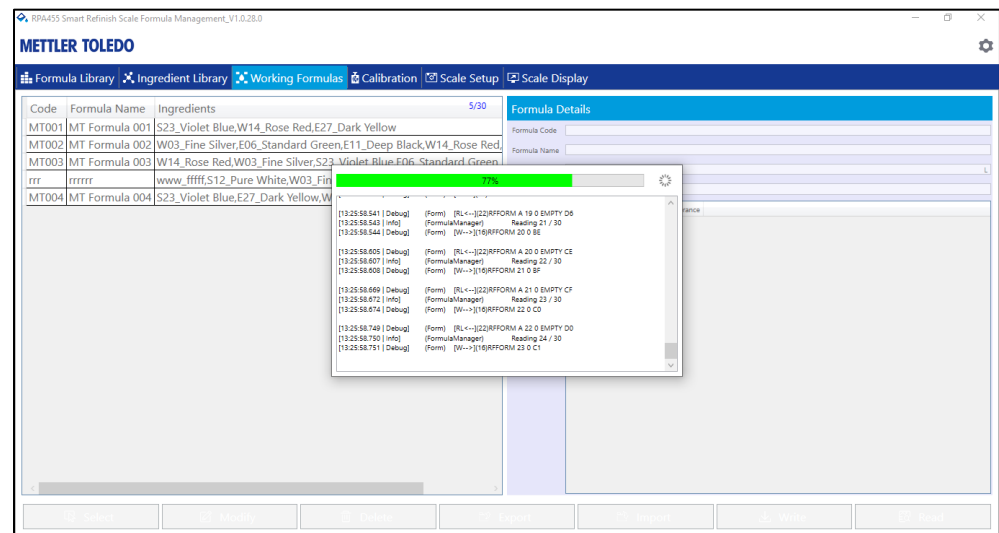


Note: Whenever you "Write" or "Read" formulas, make sure the 'Scale Display' application is turned off, otherwise, the software will show the error message "I'm busy somewhere else, please wait or free me first".

2.5. Reading Formulas from the Scale

This application is to upload the formulas to the PC software, which included on the scale.

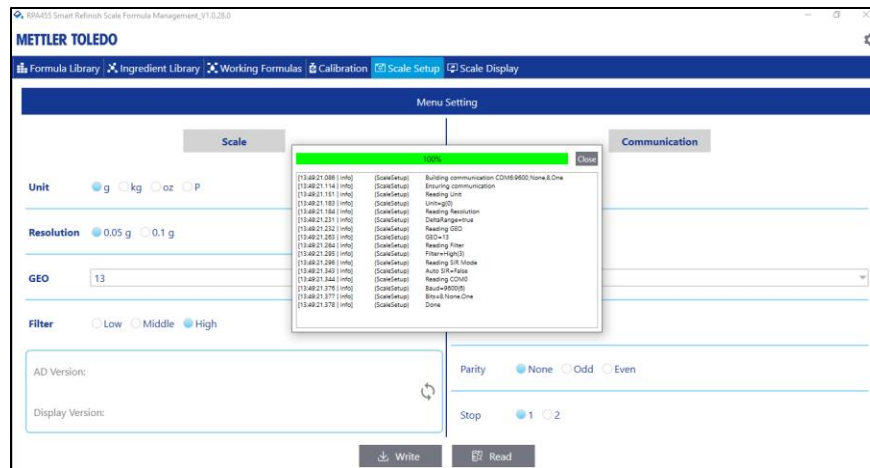
- 1. Click "Working Formulas".
- 2. Click "Read" to receive the formulas from the scale.



3. More Functions

3.1. Scale Setup

This application is to implement the basic setup, e.g.: "Unit", "Resolution", "GEO" and "Filter".

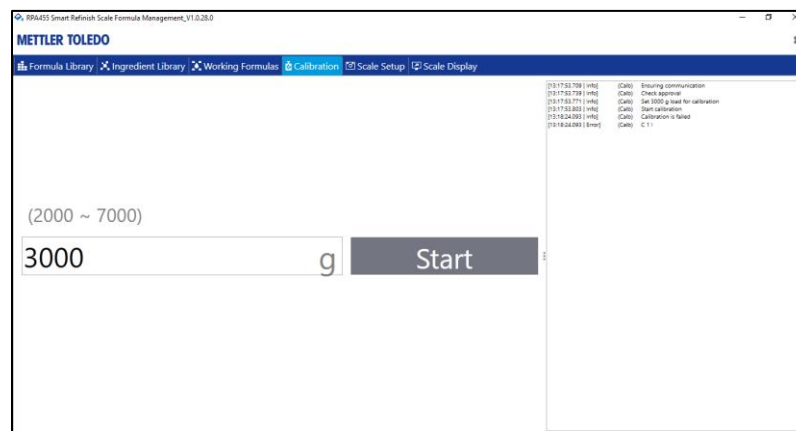


Note: Whenever you "Write" or "Read" the settings, make sure the 'Scale Display' application is turned off, otherwise, the software will show the error message "I'm busy somewhere else, please wait or free me first".

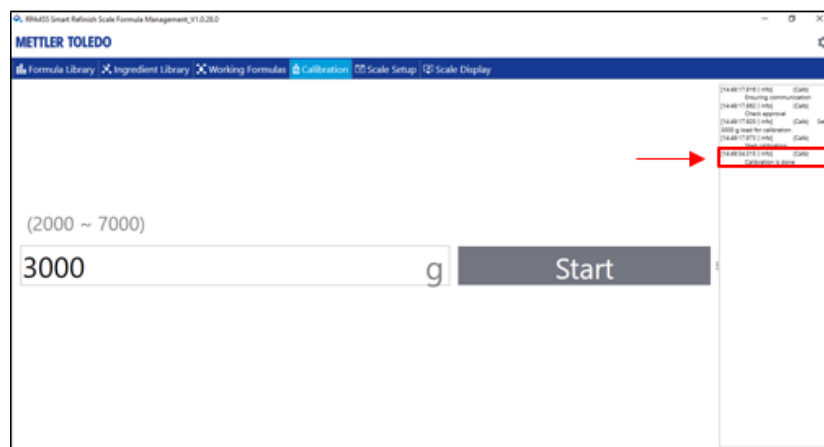
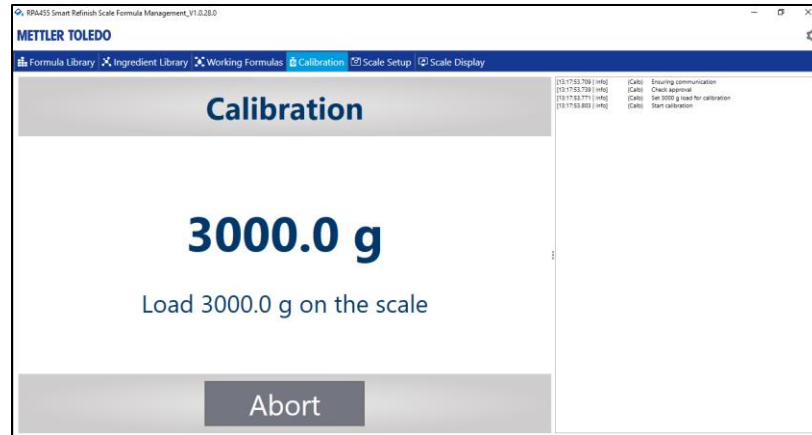
3.2. Scale Calibration

Take the standard weight to calibrate the scale regularly.


1. Type the standard weight and click "Start".



2. Load the weight on the scale, and then unload it when the calibration finishes.



3.3. Auxiliary Display

Auxiliary display will show the same weight reading as on the scale, press  to power on/off, it is also available to do some zero/tare work.

