

TERNPOINT



USER GUIDE

TPS Quality Management

TERNPOINT.SOLUTIONS



TPS Quality Management

TPS Quality Management is an extension that allows for the tracking of quality results and placing lots on hold. In addition, this extension can track the check in of tools, equipment calibration, USDA grade scoring, and composite sampling. When a lot is on hold, restrictions can be placed on which transactions can be performed on the lot, including picking, shipping, and consumption.

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LICENSING

A companion app to manage licensing is automatically installed with the first app that is installed from Ternpoint Solutions

1. A new **Permissions Set** was added as part of the app install. **TPS LM LICENSE MGT**. Assign this permission sets to users in advance of use, on the **User Setup** card.
2. Extension Setup
 - a. Search for and open **Extension Management**.
 - b. Select **Ternpoint License Management** and open.
 - c. Ensure *Allow HttpClient Requests* is activated

Ternpoint License Management

Group

App ID 320dac76-d021-4827-a159-f37... Publisher Ternpoint Solutions LP

Name Ternpoint License Management Allow HttpClient Requi...

3. Ternpoint Product Registration

- a. Search for and open **Ternpoint Product Registration**.
 - i. On this page all subscription type Ternpoint Solutions apps that have been installed are shown. Also from this page contacting Support, viewing your subscription status, creating a trial license, applying for an extension to your trial license or requesting a full one year license can be done.
 - ii. Enter appropriate Contact Info and select **Register** in the ribbon.
 1. *If registering the app in a separate company from one already purchased, ensure the same contact information is used across all Business Central companies to avoid a second monthly subscription fee. The license fee is per Business Central tenant,*
 - iii. In the line section of the page select **Create Trial License**.
 1. A 30 day trial license will be created for evaluation purposes.
 2. If more time is needed to evaluate the app please select **Contact Support** for us to extend the trial license. After its extended select the line and click **Retrieve License**.
 3. In order to purchase a full license please select **Request Full License**.
 4. *Email setup must be enabled in order to send emails requesting licenses or to contact support using the link.*
 - iv. In order to uninstall the app, navigate to **Extension Management**, select the app and select **Uninstall** in the ribbon.

Product Registration

Retrive All Licenses | Contact Support | More options

General

Subscription ID {6e98fb82-f704-4998-8b14-636... Contact Info

Environment Production First Name Kirk

Registered Last Name Southcott

Registered On 9/20/2023 E-Mail tpdemo@ternpoint.solutions

Verify License for San... Phone No. 310-525-6470

Contact ID {e61ac350-ec05-4941-a4f7-96f0...

Company >

Applications | Manage

➤ New Line | Create Trial License | Retrieve License

⌵ Delete Line | Reset License | Request Full License

App Id	App Name	Subscription Type	Subscription Status	Installed On	Expires On
→ {e036113a-c9ad-435...	Container Management	Trial	Active	8/22/2023 7:02 AM	4/26/2024 9:51 AM
{d85f7ee0-0739-419...	Freshness Rules	Trial	Active	3/27/2024 9:47 AM	4/27/2024 2:00 PM
{94cc9cf4-d34a-420...	Quality Management	Trial	Active	4/1/2024 8:51 AM	4/28/2024 2:00 PM

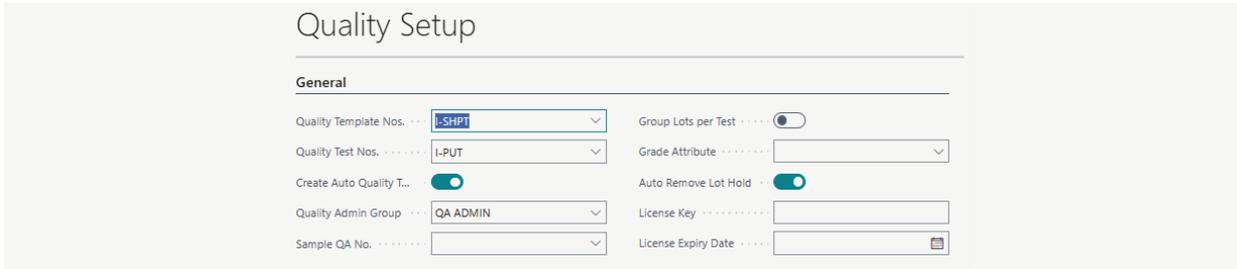


QUALITY PERMISSIONS

1. Two new **Permissions Sets** were added as part of the app install. **TPS Quality Read**, **TPS Quality Edit**, and **TPS Quality Objects**. Assign these three permissions sets to users in advance of use, on the **User card(s)**.

QUALITY SETUP

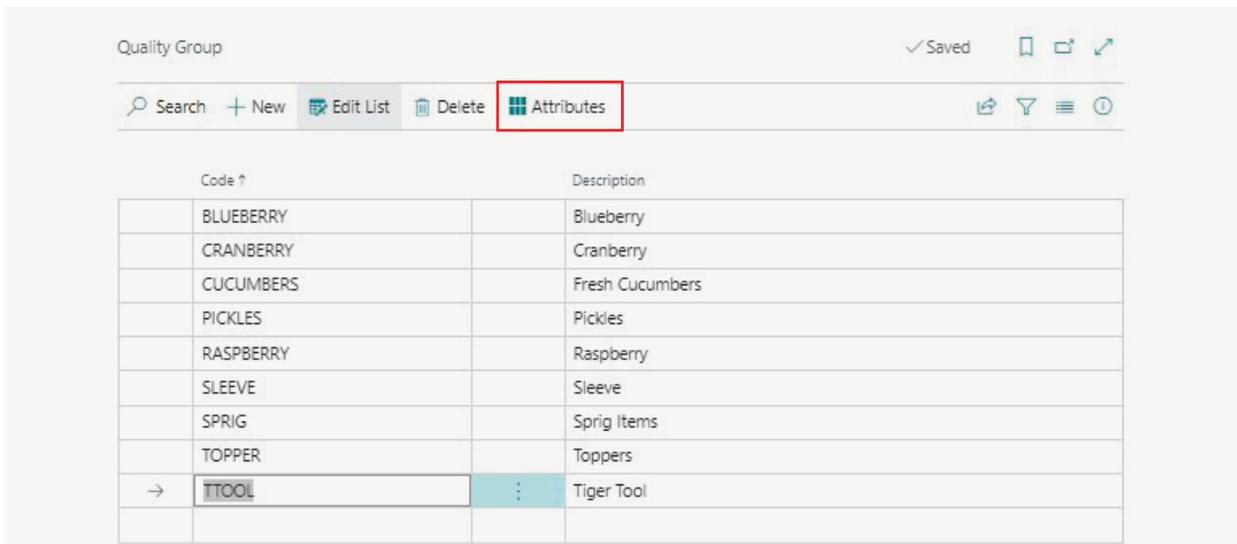
1. Search for and open **Quality Setup** and open the page.



2. There are one-time setups here for the number series to be used on templates, tests, and samples as well as the admin permission set, which controls who can approve **Quality Templates**.
3. Select/Create a **Quality Admin Group** then add appropriate users to it that are able to approve **Quality Templates**.
4. **Auto Remove Lot Hold** option determines whether the lot is removed from hold automatically on pass or whether this is controlled manually using the functions on the lot card.

QUALITY GROUPS

1. Search for **Quality Group** and open the page.
2. Enter a Code and a Description.
3. Navigate to the **Items** that are part of this group and populate the **Quality Group** on the Item tab of the **Item Card** for each item in that group.
4. Default **Attributes** can also be setup on the group and can auto-populate when a new template is created, and the group assigned.



QUALITY ATTRIBUTES

Quality Attributes are the types of tests that will be done when performing a Quality Test.

1. Search Quality Attributes and open the page.

Name	Type	Values	Blocked	Category Code	Sub Category Code	Calc Formulae
BY-UndevelopedDamaged	Decimal	--	<input type="checkbox"/>	BY-DEFECTS	UNDEVELOPEDDAMAGED	
CalcScore	Integer	--	<input type="checkbox"/>			BB-PinkBrightRed+BB-Crushed BB-PinkBrightRed*5
CDS-BrusedTissueDamageMinor	Decimal	--	<input type="checkbox"/>	CDS-DEFECTS	BRUISEDTISSUEDAMAGEM...	
CDS-BrusedTissueDamageSerious	Decimal	--	<input type="checkbox"/>	CDS-DEFECTS	BRUISEDTISSUEDAMAGESE...	
CDS-CrushedMustyBroken	Decimal	--	<input type="checkbox"/>	CDS-CHARACTER	CRUSHEDMUSHYBROKEN	
CDS-Discoloration	Decimal	--	<input type="checkbox"/>	CDS-COLOR	DISCOLORATION	
CDS-Doubles	Decimal	--	<input type="checkbox"/>	CDS-SIZE	DOUBLES	
CDS-MoreThan1of16	Decimal	--	<input type="checkbox"/>	CDS-SIZE	MORETHAN1OF16IN	
CDS-MoreThan1of4	Decimal	--	<input type="checkbox"/>	CDS-SIZE	MORETHAN1OF4IN	
CDS-Pits	Decimal	--	<input type="checkbox"/>	CDS-DEFECTS	PITS	
CDS-SepalLikeBracts	Decimal	--	<input type="checkbox"/>	CDS-DEFECTS	SEPALLIKEBRACTS	
Clarity	Decimal	--	<input type="checkbox"/>			
Color	Option	Bright Red,Med Red,Dark Red,...	<input type="checkbox"/>			
Color ok?	Boolean	Yes,No	<input type="checkbox"/>			

2. Select **New**.

3. Enter a Name and select a data type in the **Type** field.

a. If **Option** is selected as the **Type**, then **Item Attribute Values** can be assigned by selecting the **Quality Attribute Values** option in the ribbon.

b. Note: a **Type of Boolean** is a yes/no or true/false.

4. You may want to associate the attribute to a **Category Code** and **Subcategory Code**, although this is only needed for grading type attributes.

5. Select normal as the **Calc Field Type** for an attribute where a user will enter a value or **Calculation** as a type for a value that is calculated from another attribute.

a. For example if the sample weight in KG is calculated from the user entering a sample weight in LB. A **Calc Formula** can be added to automatically calculate the KG attribute after the value in LB is entered.

b. To enter a **Calc Formula** select **Attribute Formula** in the ribbon.

c. Select the **Operator 1 Type** as **Attribute**, then select the **Attribute Code** the user will enter into. Then select an **Operator** and then then **Operator 2 Type** and value. Similar to the setup below.

i. Note a series of calculations can be added and a **Priority** noted to tell the system what sequence to perform the calculations.

Operator 1 Type	Operator 1 No.	Operator	Operator 2 Type	Operator 2 No.	Operator2	Priority
→ Attribute	BB-PinkBrightRed	+	Attribute	BB-Crushed		0
Attribute	BB-PinkBrightRed	*	Constant	5		0

6. You may also block the attribute if it is no longer used by selecting the **Blocked** option.

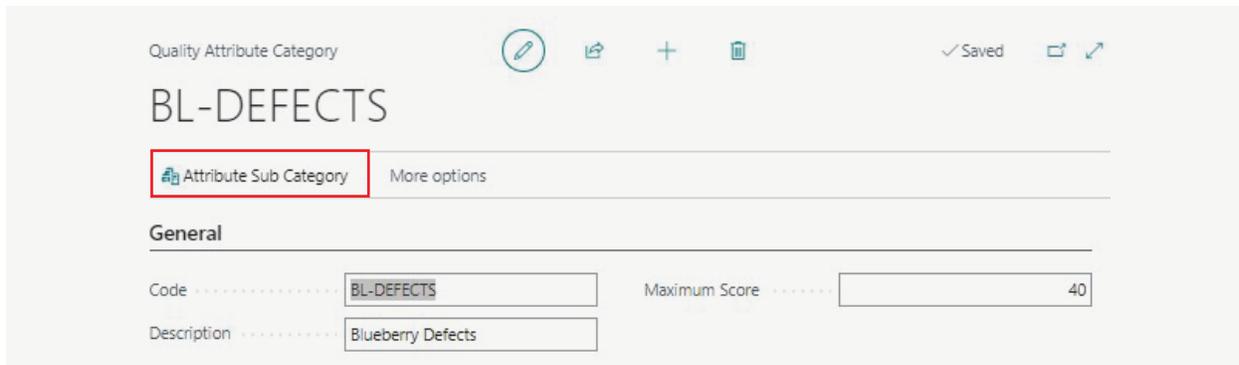
7. Close the page when complete or select the + New option to add another.



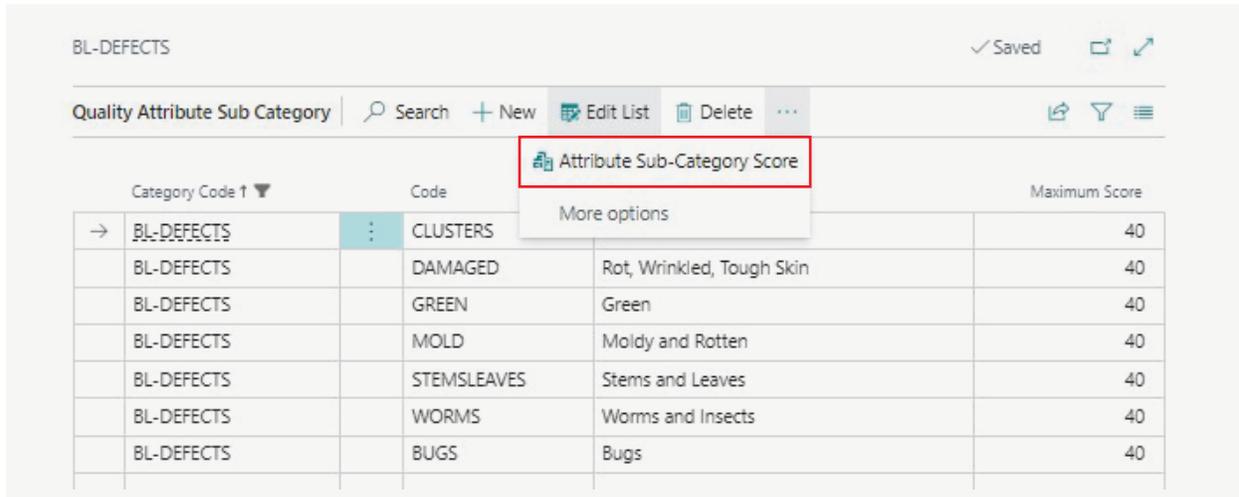
QUALITY CATEGORIES AND SUBCATEGORIES

Quality Categories and Subcategories are only required if the attribute is to be used in a grade letter and numerical scoring process. The highest value recorded across all subcategories in a category is used for the grade of that category.

1. Search for an open **Quality Attribute Category**.
2. Select the + to create a new record or open an existing record.
3. Enter a **Code**, **Description**, and a **Maximum Score** for the category.
 - a. Generally, USDA grading criteria is a total score of 100 across all categories.



5. Select **Quality Attribute Subcategory** to create a new record or open an existing record.
6. Enter a **Code**, and **Description**. The Maximum score will populate from the **Category Code**.
7. For each Sub Category a range can be supplied in order to determine a grade and score.
8. Select **Attribute Sub-Category Score** in the ribbon.



9. Select **Attribute Sub-Category Score** in the ribbon.
10. Enter an **Upper**, **Lower**, **Score**, and **Grade**. Note that the maximum score is that of the category.



Quality Attribute Sub-Cat Score Range ✓ Saved  

Search + New  Edit List  Delete | More options   

Category Code ↑	Code ↑	Lower Limit	Upper Limit	Score	Grade
→ BL-DEFECTS	⋮ CLUSTERS	0	0	40	A
BL-DEFECTS	CLUSTERS	1	2	39	A
BL-DEFECTS	CLUSTERS	3	4	38	A
BL-DEFECTS	CLUSTERS	5	6	37	A
BL-DEFECTS	CLUSTERS	7	8	36	A
BL-DEFECTS	CLUSTERS	9	10	35	B
BL-DEFECTS	CLUSTERS	11	12	34	B
BL-DEFECTS	CLUSTERS	13	14	33	B
BL-DEFECTS	CLUSTERS	15	16	32	B
BL-DEFECTS	CLUSTERS	17	500	31	SSTD

ii. Close all windows and repeat to setup additional records.

QUALITY GRADES

Quality Grades are the USDA grades that a product can have.

- i. Search for and open **Quality Grades** (or drill down from the subcategory score page).
- ii. Enter a **Code, Description, Value,** and if desired a **Color Code.**
 - a. Note the **Value** is used to determine which grade is selected as the overall grade across categories. The lower the **Value** the higher value of importance. For example, if one category is assessed a **Grade** of A and one **Grade** of B the overall grade for the test will be B in the setup below.

Quality Grades   

Search + New  Edit List  Delete | More options   

Code ↑	Description	Value	Color Code
→ A	⋮ A	4	Green
B	B	3	Yellow
C	C	2	Blue
SSTD	SubStandard	1	Red



QUALITY TEMPLATES

Quality Templates are the types of tests that may be performed on a day-to-day basis. The template consists of a header and a series of **Quality Attributes** which will have values recorded at the time of testing.

1. Search for **Quality Templates** and open the page.
2. Select the + sign to add a new record or **Reopen** function to edit an existing record.
3. Tab off the **No.** field to assign a new number from the **No. Series** noted in the **Quality Setup**.
4. Enter a **Description** for the template.
5. Select an **Applies To** value:
 - a. If the template is related to an inventory transaction, then **Lot** would be selected.
 - b. If the template is related to an inbound truck inspection for a receipt, then **Warehouse Receipt** would be selected.
 - c. If the template is related to an inbound truck inspection for a shipment, then **Warehouse Shipment** would be selected.
 - d. If the template is related to a production job, but not specifically to the item, then **Production Order** would be selected.
 - e. If the template is related to an **Environmental** audit such as sampling drains or checking pest control devices, then **Environmental** would be selected.
 - f. A **Machine** or **Work Center** would be used to track post sanitation equipment sampling or metal detector validations.
 - g. **Resources** would be used for **Tool Check In**. See section below for the **Tool Check In** process.
 - h. If the template will be created from a **Purchase Order** then select that option.
6. If the **Quality Template** is applicable to a subset of **Items**, select a **Quality Group**.
 - a. Note the **Quality Group** should be specific on the item.
7. Select a **Hold Reason Code** if the Lot should go on hold if the related **Quality Test** fails.
 - a. Related to the **Hold Reason Code** are fields restricting the type of transaction that is prohibited when the Lot is on hold for that reason.
 - b. A **Hold Reason Code** is also available on the **Item Card**. Each new lot that is created is placed on hold for this reason.

Lot Reason Code ↑	Description	Stop Shipping	Stop Pick	Stop Consumpt...
→ INCOMING	Hold for QA Incoming Inspection/release	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
MICRO	Hod for Micro results	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
QA RELEASE	Hold for QA Inspection/release	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

8. For templates related to **Composite Samples**, select **Lot** as the **Type**, and enter a **Minimum Sample Size** if appropriate.
9. If the template is for USDA grading where a score and letter grade will be calculated select **Grading Type**.
10. If the template is the default template that should be automatically created for that **Quality Group** when a lot is created, select **Default**.
11. Select **Attributes** in the lines from the list on each line.
12. Enter a default **Value** if appropriate.
13. Enter an **Upper** and **Lower Limit** for that attribute if required (this feature can only be used in decimal or integer **Type** values).
 - a. If the attribute is a decimal or integer, the system first validates the **Upper** and **Lower Limit** range for the pass/fail check. If there is no **Upper** or **Lower Limit**, then the system will look to the **Value** to see if the result matches. If both are blank, the test is informational, and any value will pass.



Quality Template
QTEM00012 · Blueberry Grading

Approve
 Enable
 Reopen
 Automate
 Fewer options

General

No. QTEM00012
 Description Blueberry Grading
 Applies To Lot
 Quality Group BLUEBERRY

Default Enabled
 Date Created 4/15/2024
 Created By KSOUTHCOFF
 Set Hold

Approved
 Hold Reason Code
 Minimum sample size 0.00
Grading Type

Lines | New Line | Delete Line | Add Attribute Range

Attribute	Attribute Type	Value	Unit of Measure	Lower Limit	Upper Limit	Dependent attribute Name	Category Code	Sub Category Code	Not Mandatory	Calc Field Type	Default Calculation
Employee	Text								<input type="checkbox"/>	Normal	
BL-Red/Purple	Decimal			0	40		BL-COLOR	RED/PURPLE	<input type="checkbox"/>	Normal	
BL-Stems/Leaves	Decimal			0	40		BL-DEFECTS	STEMS/LEAVES	<input type="checkbox"/>	Normal	
BL-Green	Decimal			0	40		BL-DEFECTS	GREEN	<input type="checkbox"/>	Normal	
BL-Damaged	Decimal			0	40		BL-DEFECTS	DAMAGED	<input type="checkbox"/>	Normal	
Rotten	Decimal			0	40				<input type="checkbox"/>	Normal	
Visible Mold	Decimal			0	40				<input type="checkbox"/>	Normal	
Weight of 50 berries	Decimal			0	.178				<input type="checkbox"/>	Normal	
Temperature	Decimal			0	2				<input type="checkbox"/>	Normal	
pH	Decimal			0	8				<input type="checkbox"/>	Normal	
Berry Count	Decimal			0	100				<input type="checkbox"/>	Normal	

14. Enter a **Dependent Attribute Name** if the results of the **Attribute** line selected determine the value of another **Attribute** on the template.
 - a. Select **Add Attribute Range** in the line ribbon to determine the value of the **Dependent Attribute** based on the result of the test.
 - i. In this example the **Grade** is A if the burn value is between 1 and 3.
 - ii. Ensure the **Upper** and **Lower Limits** on the template encompass the full range of values possible in the dependencies (i.e. 1-9 below).

Edit - Quality Template Attribute Range

Search
 + New
 Edit List
 Delete
 More options

Value	Lower Limit	Upper Limit	Dependent attribute Name
→ A	1	3	Rotten
B	4	9	Rotten

15. A value on all lines is considered mandatory to pass the test unless the **Not Mandatory** box is checked on the line.
16. When complete select **Approve** and **Enable** to start using the Quality Template
 - a. To edit select **Reopen**.
17. Close the page and return to the main menu.
18. A **Copy** option has been added to duplicate a **Quality Template** to a new template.



LOT HOLDS AND HOLD RELEASES

On the Lot No. Information Card functions have been added to place a lot on hold and release a lot from hold, with appropriate reasons to select from. When placing a lot on hold a comment can be added, also when releasing a lot from hold a comment can be added. The date and user id of the user releasing from hold is recorded. In order to track changes, ensure change log is activated for these fields.

HOUSING1 · 012424

Home Lot No. More options

Find entries... Print Label Create Quality Test Quality Tests Lot Availability By Location Release Hold Apply Hold

General

Item No.	HOUSING1	Certificate Number		Hold Release Reason Comment	Results received, passed Micros
Variant Code		Blocked	<input checked="" type="checkbox"/>	Hold Released By	KSOUTHCOIT
Lot No.	012424	Hold Reason Code		Hold Released Date	11/6/2024
Description		Hold Reason Comment	Pending Micro Results from Lab	Quality Test Status	Open
Test Quality		Hold Release Reason Code	PASSED	Quality Test Exist	<input checked="" type="checkbox"/>
				Pending Release	No

RESOURCES

Resources are used as the Business Central setup for Tools and Equipment.

1. Search for **Resources** and open the page.
2. Click **New** to create a new **Resource**.
3. Enter a **Code** and a **Name**.
4. Select **Machine** as the **Type** and **EA** as the **Base Unit of Measure**.
 - a. **Resources** have many fields but other than the fields listed above the remainder can be left blank.
5. If a **Resource** is lost or disposed of, open the related **Resource** card, and mark the **Resource** as **Blocked** to prevent further use.

Resource Card

DIGTHERM9683 · Digital Thermometer Ser 9683

Process Resource Report More options

General

No.	DIGTHERM9683	Search Name	DIGITAL THERMOMETER SER 9683
Name	Digital Thermometer Ser 9683	Resource Group No.	TOOL
Type	Machine	Blocked	<input checked="" type="checkbox"/>
Base Unit of Measure	EA	Last Date Modified	8/3/2022
		Use Time Sheet	<input checked="" type="checkbox"/>

CHANGE LOG SETUP

1. The setup of the **Change Log** is required to track changes to Values recorded on **Quality Test Lines**, ensuring compliance with regulations.
2. A document on how to set up the **Change Log** can be found here.
 - a. <https://docs.microsoft.com/en-us/dynamics365/business-central/across-log-changes>
3. Ensure **Modify** tracking flag is used on the **Quality Test Line** table for at least the **Value** field.



Processing Audits

CREATE QUALITY TESTS FROM A RECORD

1. From the relevant area of the system that was noted on the **Applies To** field of the template (**Warehouse Shipment, Warehouse Receipt, Lot, Production Order** etc) select **Create Quality Test** in the ribbon of the relevant page.
2. The look up list of available **Templates** will be filtered to that **Type** of record. In the case of a **Quality Test** initiated from a **Lot**, the list may be further filtered by the **Quality Group** on the **Item**.
3. The **Sample Size** will default to 1. If a larger sample weight is sampled then adjust and the values entered will be divided by this size.
4. Enter the test result values into the **Value** field on each attribute line.

Quality Test
IPU000023

Validate Get Lines Change Log Entries Update Grade Score Automate Fewer options

General

No. IPU000023 Item No. HOUSING1 Tool Status
 Description inline audit Status Pass Sample Size 2.00
 Applies To Lot Comment Approver ID
 Source No. D11224-1 Date Created 4/8/2025 Approved On
 Quality Group COFFEE Created By AMITTAL Inspector ID
 Lot No. D11224-1 Days Created 6 Inspected On
 Hold Reason Code HOLD TEST

Lines Delete Line Create Test

Sequence No.	Lot No.	Attribute	Attribute Type	Value	Unit of Measure	Status	Category Code	Sub-Category Code	Grade	Score	Lost Score	Error Message	Created By	Created On	Last Date Modified
1	D11224-1	pH	Decimal	2.125		Pass				0	0		AMITTAL	9:34:51 PM	4/8/2025
1	D11224-1	Temperature	Decimal	4		Pass				0	0		AMITTAL	9:34:51 PM	4/8/2025
1	D11224-1	Clean	Boolean	Yes		Pass				0	0		AMITTAL	9:34:51 PM	4/8/2025

5. Validations will be performed as the user moves from one line to another.
6. Lines that have failed will indicate a reason for failure and be noted in red.
7. If multiple tests are performed over time or multiple samples are tested, then the **Create Test** function in the lines ribbon can be used to create a duplicate set of lines for recording results.
 - a. This can also be used for grading where a grade is calculated per set of tests. Note there is currently no roll up across all samples to calculate an overall grade for the entire QA test.
8. If a Hold Reason Code is indicated from the Quality Template, the associated Lot will be placed on hold for this reason.
9. In the ribbon there is a link to view the **Change Log Entries**. See **Change Log Setup** area of this document on steps to track changes.
10. **Days Created** displays how many full days the **Quality Test** has been open.
11. Exit the **Quality Test** page when complete.



MANUAL CREATION OF A QUALITY TEST

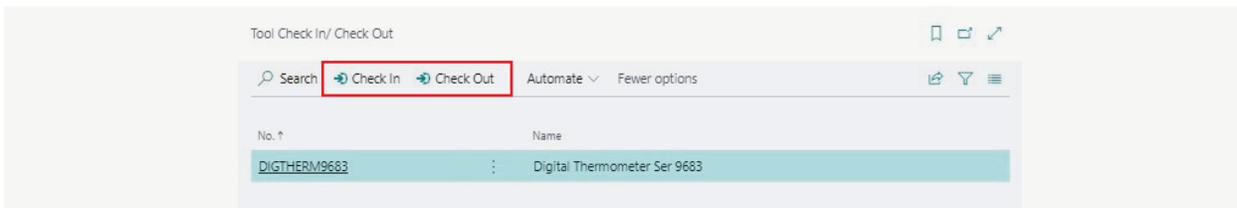
1. Search for **Quality Tests** and open the page.
2. Select **New**.
3. Enter a **Description**.
4. Enter a **Source No.**
5. Adjust **Sample Size**, if appropriate.
6. In the ribbon select **Get Lines** to populate the lines with attributes from the template.
 - a. If a list opens, select the appropriate template.
7. Enter test results into the **Value** field on each attribute line.
8. Lines that have failed will be indicated with a reason for failure.
9. If multiple tests are performed over time or multiple samples are tested, then the **Create Test** function in the lines ribbon can be used to create a duplicate set of lines for recording results.
 - a. This can also be used for grading where a grade is calculated per set of tests. Note there is currently no roll up across all samples to calculate an overall grade for the entire QA test.
10. If a **Hold Reason Code** is indicated from the **Quality Template** the **Lot** will be placed on hold for this reason.
11. In the ribbon there is a link to view the **Change Log Entries**. See **Change Log Setup** area of this document on steps to track changes.
12. Exit the **Quality Test** page when complete.

DEVICE CALIBRATION

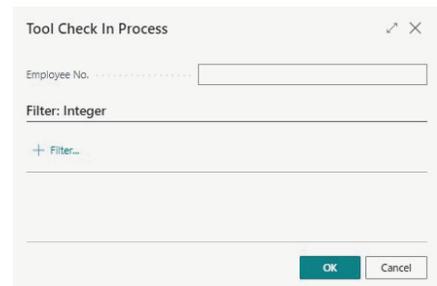
1. For **Manual Quality Test Creation** follow the steps above.
2. Before beginning, ensure that the device is set up as a **Resource** in the system (see **Resource** setup above) or a **Machine Center** or **Work Center**. For implementations not using **Routings** a **Resource** is recommended.

TOOL CHECK IN

1. Search for **Tool Check In/Out** and open the page.
2. Select the desired Tool (resource) from the list and select **Check In** or **Check Out** from the ribbon. Note a tool cannot be checked back out if its already checked out



3. Enter/Scan your **Employee No.** and press OK.
4. Open the **Quality Test** by selecting **Yes** or **Select No** to complete check in.



COMPOSITE SAMPLING

Composite Samples are used when a small qty of product is taken at regular intervals on a production line then combined together in a larger sample and then tested.

1. Search for **Composite Sample List** and select **New**.
2. Tab off the **No.** field to assign a new number from the **No. Series** setup on the **Quality Setup page**.
3. Enter an **Item No.** and if required a **Lot No.** and **Production Order**.
 - a. If a **Lot No.** and **Production Order** are selected in the header, they will default into the lines but can be overwritten if needed. If left blank, the values can be populated on each line.
4. Enter samples in the lines by entering a **Quantity** (and **Lot No.** and **Production Order** if not defaulted from the header).
5. Select a **Unit of Measure** for the sample.
6. The **Total Quantity** is calculated in the header as lines are entered.
7. Select **Release** when ready to test the sample, followed by **Create Quality Test**.
8. A warning will appear asking if the user wants to continue if the **Total Quantity** is less than the **Minimum Sample Size** on the associated **Quality Template**.
9. Enter the line **Values** as required.
10. Since multiple **Lots** could be on a **Composite Sample** no hold is placed should the sample fail.

Composite Sample

CSAM1000436 · IQF Grade A Organic Blueberries

Reopen Release Create Quality Test Quality Tests More options

General

No. CSAM1000436 Lot No. LN000023

Item No. IQFBLUE50LB Production Order

Item Description IQF Grade A Organic Blueberries Total Quantity 12.00

Quality Group BLUEBERRY Status Open

Created By KSOUTHCOTT

Lines Manage

Sample ID 1	Lot No.	Quantity	Production Order	Unit of Measure	Date Created	Time Created
→ CSAM1000...	LN000023	8.00		G	8/2/2023	2:44:49 PM
CSAM1000...	LN000023	4.00		G	8/2/2023	2:45:17 PM

