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Certificate of analysis

A Certificate of Analysis (CoA) is an electronic document used by suppliers to confirm that a specific product batch or lot meets defined quality specifications. These specifications can include identity, potency, impurities, and microbiological or physical properties.

For more information about Certificate of analysis guidelines, see Certificate of analysis transaction.

Create and submit certificate of analysis

Perform this task to create and submit new certificate of analysis. Additionally, customers can begin work on a certificate of analysis and save it for completion at a later time.

Create and submit a new certificate of analysis

1. Select the Main Menu  icon.
2. Select My Networks in the header.
3. Select a [MPL Network] from the Select your Network drop-down in the header.
4. Select a Partner or Location (e.g. your entire company or a Link to a specific Partner or internal location) in the header.
5. Select the Go button.

6. Select Manufacturing - Supplier from the left menu.



Partners must have the correct roles assigned if using the Owner's instance of Multienterprise Information Network Tower.

7. Select Certificates Of Analysis.

8. Select the New  button.

9. On the New Certificate of Analysis screen, fill in the following fields:

- i. Certificate Of Analysis Number field - The unique identifier assigned to each certificate of analysis.
- ii. Certificate Of Analysis Date field - The date the certificate of analysis was issued.

10. Select the Save  button.

The screen refreshes with the saved grocery products purchase order in the draft state and with the required sections populated.

11. Select the Edit  button.

12. In the Transaction Information section, select Submitted from the Process Status drop down.

13. In the Certificate Of Analysis Information section fill in one or more of the following fields:

- i. Certificate Of Analysis Number field - The unique identifier assigned to each certificate of analysis.

This field auto populates the value entered on the New Certificate of Analysis screen.

- ii. Certificate Of Analysis Date field - The date the certificate of analysis was issued.

This field auto populates the value entered on the New Certificate of Analysis screen.

- iii. Document Revision field – The file information that helps track and manage different versions of a document as it is updated or changed over time.
- iv. System Revision field – The system information that tracks and manages different versions of the system as it is updated or modified over time.
- v. Document Owner Email field – The email address of the company or organization associated with that file.
- vi. Data Owner Email field – The email address of the company involved in the shipment details in the file
- vii. Document Content Revision field – A record that tracks changes made to the document content over time, so different versions can be managed and referenced.
- viii. Description field – A brief explanation of the digital certificate transaction that provides context about the document and allows entry of free-form text details.
- ix. Verification Date field – The date on which tests reports were verified.
- x. Approval Date field – The date on which tests reports were approved.
- xi. Verified By field – The details of the person verified the test report.
- xii. Approved By field – The details of the person provided final approval for test report.
- xiii. Document Generation Date field – The date on which COA document was generated with all details of tests conducted against defined materials
- xiv. Document Generation Time field – The time on which COA document was generated with all details of tests conducted against defined materials
- xv. Action drop-down – A brief description stating the purpose of the transaction.

14. In the Reference Transactions section:

- a. Select the Add **+** icon.
- b. In the New Reference Transaction panel, fill in the following fields under Reference Transaction Information:

i. Transaction Type drop-down - The type of transaction.

iii. Transaction Number type-ahead field - The unique identifier of the transaction.

If the value does not match the available options, the value must be entered manually.

c. Transaction Date field - The transaction date.

15. Select Apply.

The new reference transaction line item is added to the transaction reference table.

1. In the Digital Signature Information section:

a. Select the Add **+** icon and fill in the following fields

i. Signature Identifier field - The contact role associated with the Grocery Products Purchase Order.

b. Select the Signature Identifier drop down in the left panel of Digital Signature Information section.

c. In the Digital Signature Signing Encoding Information section, select the Add **+** icon. and fill in the following fields:

i. Signing Authority Identifier field - Identifies the exact signature instruction set that is cryptographically signed and verified.

ii. Canonicalization Algorithm field - Algorithm followed for canonicalization or rules followed to normalize XML / JSON files before hashing.

iii. Signature Algorithm field - Algorithm followed for generating signature for signing generated document.

iv. Base 64 Signature field - The digital signature value.

d. Description field - A brief for description of signature value, if required.

2. Select the Digital Signature Signing Encoding Information drop-down and in the Digital Signature Signing Reference section, select the Add **+** icon. and fill in the following fields:

- i. Reference Identifier field – The signing authority identifier.
 - ii. Uniform Resource Identifier field – Uniform resource Identifier for signing methods and references.
 - iii. Signing Reference Type drop-down – The types of signing references available for digital certificate of analysis.
 - iv. Reference Algorithm field - The algorithm followed for signing in the signature for transforms method.
3. Digest Base64 Value field - The digest value. Based on digest value final approval is provided to COA document.
4. Digest Reference Algorithm field - Algorithm followed for signing in the signature for digest method.
5. In the Cryptographic Certificate Or Key Information section, select the Add **+** icon. and fill in the following fields:
 - i. Certificate Key Identifier field – Certificate or key identifier.
 - ii. Certificate Key Type field – There are different methods to handle signature. Users will have options to select based on their requirement.
 - iii. Key Pair Name field – Name of key pair.
 - iv. Description field – A brief description of signature value, if required.
6. Expand the Cryptographic Certificate Or Key Information, select the Add **+** icon and fill in the following fields under Key And Certificate Information section:
 - i. RSA Key Pair Name field – The name of key pair.
 - ii. RSA Key Pair field – The modulus is the large composite number in an RSA key that defines the cryptographic domain and determines the key's security strength.
 - iii. RSA Key Pair Exponent field – The RSA exponent is the power applied in modular arithmetic that enables encryption, decryption, signing, and verification in RSA cryptography.
 - iv. DSA Key Pair Name field – Name of Key Pair.
 - v. Primary Key field – A large prime number, defines the finite field where DSA operates. It is mandatory for DSA.
 - vi. Length Of Primary Key field – A prime divisor of P, but much smaller than P, it

determines signature size and security. It is mandatory for DSA.

- vii. Primary Key Generator field – A number derived from P and Q. Generates a subgroup of size Q within modulo P. Ensures all operations stay within a secure subgroup.
- viii. Public Key field – It is used by verifiers to validate signatures. It is shared publicly.
- ix. Sub Group Factor Key field – Used to verify that G is correctly generated. It is not required for signing or verification.
- x. Private Key field – It is a private to the system, part of key pair. Never shared with any other business partner.
- xi. Random Seed Number field – Random value used to generate seed number.
- xii. Random Page Counter Number field – Iteration count during key pair generation.
- xiii. X509 Certificate Name field – The certificate issuer name identifies the Certificate Authority that issued and signed the digital certificate.
- xiv. Certificate Identifier field – The certificate serial number uniquely identifies a digital certificate issued by a Certificate Authority and is used for revocation and audit purposes.
- xv. Certificate Usage field – The Subject Name is the distinguished identity of the entity that owns the public key in an X.509 certificate.
- xvi. Signing Certificate field – A digital certificate establishes trust by binding a verified identity to a public key used for secure communication and signature verification.
- xvii. Certificate Chain field – A Certificate Revocation List (CRL) is a CA-published list of digital certificates that are no longer trusted, even though they have not yet expired.
- xviii. Certificate Subject Key Identifier field – SKI is a certificate extension that uniquely identifies the public key associated with a digital certificate. It is used to identify the subject's public key.
- xix. Uniform Resource Identifier field – The URI in a retrieval method identifies the

location of cryptographic key material required for signature verification.

- xx. Certificate Retrieval Type field – The certificate or key retrieval type.
- xxi. Retrieval Dereference Algorithm field – The transform algorithm in a retrieval method defines the processing steps required to normalize and extract cryptographic key material from a referenced resource before signature verification.
- xxii. PGP Key Identifier field – A PGP Key ID is a fingerprint-derived identifier used to reference the public key that signs or verifies a digital certificate of analysis.
- xxiii. PGP Key Detached Signature field – A PGP key packet is a structured OpenPGP data unit that carries key material, identity, or signatures and collectively forms a usable PGP key.
- xxiv. PGP Key Detached Receiver Signature field – A PGP key packet is a structured OpenPGP data unit that carries key material, identity, or signatures and collectively forms a usable PGP key at receiver end.
- xxv. Description field – A brief description of PGP key usage.
- xxvi. SPKI Algorithm field – The modulus is the large composite number in an RSA key that defines the cryptographic domain and determines the key's security strength.
- xxvii. SPKI Public Key field – The RSA exponent is the power applied in modular arithmetic that enables encryption, decryption, signing, and verification in RSA cryptography.

7. Expand the Additional Signing Encoding Information section, select the Add  icon and fill in the following fields:

- a. Signing Authority Identifier field – Signing Authority Identifier.
- b. Signing MIME Type field – Specifies the MIME type used for signing, including the hashing or signature algorithm. The value of this attribute is represented as base64-encoded binary data.
- c. Signature Encoding field – Signature Encoding mechanism, it includes permutation and combination of different bits of key, respective algorithm for

encryption and decryption.

- d. Description field – A brief description mention any remarks around addition signing and encoding parameters.

8. In the Supplier and Customer section, fill in the following fields under Supplier group:

- i. Company type-ahead field – The name of the company sending the certificate of analysis. This company is the customer of goods. This field pulls from the Owner's company and location master data.

The remaining Supplier fields are auto populated with the values from the company or location's master data entry. If the name of the company is not present in the Owners master data, the company name must be entered manually.

- ii. Address 1 field – The address of the particular location.
- iii. Address 2 field – Any additional address information.
- iv. Country drop-down – The two-letter country code with country name for this location.
- v. State field – The state or region for this location.
- vi. City field – The city for this location.
- vii. Postal Code field – The postal code for this location's main address.
- viii. Contact Telephone Number field – The company or location's phone number.
- ix. Contact Fax Number field – The company or location's fax number
- x. Party ID Type drop-down – The identifier type used for this company or location.
- xi. Party ID Value field – The value associated with the identifier type.

9. In the Supplier and Customer section, fill in the following fields under Customer group:

- i. Company type-ahead field – The name of the company receiving the certificate of analysis. This company is the supplier of goods. This field pulls from the Owner's company and location master data.

The remaining Customer fields are auto populated with the values from the company or location's master data entry. If the name of the company is not present in the Owners master data, the company name must be entered manually.

- ii. Address 1 field – The address of the particular location.
- iii. Address 2 field – Any additional address information.
- iv. Country drop-down – The two-letter country code with country name for this location.
- v. State field – The state or region for this location.
- vi. City field – The city for this location.
- vii. Postal Code field – The postal code for this location's main address.
- viii. Contact Telephone Number field – The company or location's phone number.
- ix. Contact Fax Number field – The company or location's fax number
- x. Party ID Type drop-down – The identifier type used for this company or location.
- xi. Party ID Value field – The value associated with the identifier type.

10. In the Party Identification section select the Add  icon and fill in the following fields under Address Entity section:

- i. Company Entity Type drop-down – The type of the partner entity involved in this business transaction.
- ii. Company type-ahead field – The company name for partner or location. This field pulls from the Owner's company and location master data.
- iii. Address 1 field – The address of the particular location.
- iv. Address 2 field – Any additional address information.
- v. Country drop-down – The two-letter country code with country name for this location.
- vi. State field – The state or region for this location.
- vii. City field – The city for this location.
- viii. Postal Code field – The postal code for this location's main address.

- ix. Contact Telephone Number field – The company or location's phone number.
- x. Contact Fax Number field – The company or location's fax number
- xi. Party ID Type drop-down – The identifier type used for this company or location.
- xii. Party ID Value field – The value associated with the identifier type.

11. In the Line Items section:

- a. Select the Add **+** icon.
- b. In the New Line Item panel, fill in the following fields under Line Item Information section:
 - i. Description field – A brief Description about the type of materials or tests involved.
 - ii. Verification Signatory Authority field – The verification Signatory Authority is the trusted entity that validates the identity and cryptographic credentials of the document signer.
 - iii. Approval Signatory Authority field – The authorized individual to approve documents, transactions, or decisions.
 - iv. Item field – The product or material being referenced in the order.
 - v. Quantity field – The total quantity of material for which tests performed
 - vi. Quantity Unit Of Measure drop-down - The material unit of measure, for each quantity mentioned in Quantity.
 - vii. Manufacturer Product Code Value field - The material part number
 - viii. Lot Number field - The manufacturer lot number.
 - ix. Customer Lot Number field - The customer lot number
 - x. Material Description field - A brief description of material.
 - xi. Manufacturer Type field - The type of manufacturers considered for materials from which materials are expected for testing.
 - xii. Manufacturer Hierarchy field - The hierarchy of manufacturer for specified product.
 - xiii. Plant Identifier field - The plant within which material was manufactured.

- xiv. Manufacturer Description field - A brief description about the manufacturer or supplier.
 - xv. Lot Manufacturing Date field - Manufacturing date of complete lot or batch.
 - xvi. Received Date field - The date on which batch received for testing.
 - xvii. Expiration Date field - The expiry date for complete lot
 - xviii. Retest Date field - The epoch retesting of batch, if required.
 - xix. Manufactured Product Description field - The manufactured product lot related description
 - xx. Line Notes field – Additional information about the line item being added.
- c. Select Apply.

The new line item is added.

- d. Select a line row and then select the branch  icon and fill in the following fields under Material Inspection Specification Detail section:
- i. Material Description field – A brief description of material.
 - ii. Description field – A brief description of any other details to be specified for material, can be mentioned.
 - iii. Inspection Type field – A test of attribute is an evaluation performed to confirm that a defined material or component characteristic complies with specified acceptance criteria.
 - iv. Inspection Criteria field – The criteria used to inspect or qualify for test. For example: Minimum, maximum, mean, etc.
 - v. Unit Of Measure drop-down – The unit of measure applicable to the specified Quantity.
 - vi. Inspection Method field – The method defined by supplier, for specified material measurement conducted.
 - vii. Test Result Specification Limit field – The relational condition used to evaluate a measured result against its acceptance criteria.
 - viii. Test Result Specification Value field – The test result value. Only numeric

values are accepted.

ix. Test Result Description field – A brief description related to test results.
Test results value will appear with symbols in data character field.

x. Test Specification Lot Identifier field – The identifier used for test execution, to track information related to test results.

xi. Test Specification Identifier field – The identifier of test specification document.

xii. Test Specification Description field – A brief description of test specification.

xiii. Sample Collection Location field – The material sample collection location, to specify source of truth to be specified in test specification and result document as reference.

e. Select Apply.

The sub line item detail line item is added.

f. Select the grocery products invoice item detail information line row drop down to view the product information in a table.

12. In the Address Item Details section, select the Add  icon

a. In the New Address Item panel, fill in the following fields under Address Item Information section:

i. Description field – A brief description of the location details for an item in a transaction, including address and contact information (e.g., ship-to or bill-to).

b. Select Apply.

The new line item charge detail line is added.

c. Select a line item charge detail row and then select the branch  icon and fill in the following fields under Address Entity Information:

i. Company Entity Type drop-down – The type of the partner entity involved in this business transaction.

ii. Company type-ahead field – The company name for partner or location.

This field pulls from the Owner's company and location master data.

iii. Address 1 field – The address of the particular location.

iv. Address 2 field – Any additional address information.

v. Country drop-down – The two-letter country code with country name for this location.

vi. State field – The state or region for this location.

vii. City field – The city for this location.

viii. Postal Code field – The postal code for this location's main address.

ix. Contact Telephone Number field – The company or location's phone number.

x. Contact Fax Number field – The company or location's fax number

xi. Party ID Type drop-down – The identifier type used for this company or location.

xii. Party ID Value field – The value associated with the identifier type.

d. Select Apply.

The credits and charges detail line item is added.

e. Select the line item charge detail line row drop down to view the credits and charges detail in a table.

13. In the Notes section, select the Add  icon to enter any additional comments or instructions.

14. To submit the certificate of analysis:



To save the certificate of analysis in a Draft state and finish it later, ensure the Move To

button is not selected and then select the Save  Save button in the draft state.

a. Select the Move To button at the top of the screen.

The submit status indicator circle is filled in with green to indicate the desired action upon selecting save.

b. Select the Save  Save button.

The certificate of analysis is submitted.

Tips

- Select the Add  icon, to add a new line item, where available.
- Select the Delete  icon, to remove an individual line item, where available.
- New certificate of analysis can also be created by selecting the New  **New** button on the Certificates Of Analysis Details screen for an existing certificate of analysis.

Submit a draft certificate of analysis

Complete and submit a saved certificate of analysis in the draft state.

1. Select the Main Menu  icon.
2. Select My Networks in the header.
3. Select a [MPL Network] from the Select your Network drop-down in the header.
4. Select a Partner or Location (e.g. your entire company or a Link to a specific Partner or internal location) in the header.
5. Select the Go button.
6. Select Manufacturing - Supplier from the left menu.
 Partners must have the correct roles assigned if using the Owner's instance of Multienterprise Information Network Tower.
7. Select Certificates Of Analysis.
8. Select the Filter  **Filter** button to find the certificate of analysis in Draft state.
9. Select the Certificate Of Analysis Number link in the results table.

10. Select the Edit  Edit button.
11. In the Transaction Information section, select Submitted from the Process Status drop down.
12. Confirm the certificate of analysis details and select the Edit  icon associated with that line item to modify the fields if required.
13. Select the Move To button at the top of the screen.

The submit status indicator circle is filled in with green to indicate the desired action upon selecting save.

14. Select the Save  Save button.

The certificate of analysis is submitted.

Tips

- Select the certificate of analysis number row and then select the Delete  icon on the top of the Search Certificate of Analysis screen, to delete a certificate of analysis in the draft state.



A deleted transaction cannot be retrieved.

Search and view certificate of analysis

Perform this task to search for and view the details of the certificate of analysis sent or received by suppliers or customers. Viewing the details of a certificate of analysis enables suppliers or customers to quickly access order information (e.g. the quantity for each line item in an order) in TraceLink without having to search through the actual B2B message.

Search for and view certificate of analysis

1. Select the Main Menu  icon.
2. Select My Networks in the header.
3. Select a [MPL Network] from the Select your Network drop-down in the header.
4. Select a Partner or Location (e.g. your entire company or a Link to a specific Partner or internal location) in the header.
5. Select the Go button.
6. Select Manufacturing - Customer or Manufacturing - Supplier from the left menu.



Partners must have the correct roles assigned if using the Owner's instance of Multienterprise Information Network Tower.

7. Select Certificates Of Analysis.
8. Select the Filter  button.
9. In the Filters panel, fill in one or more of the following fields to filter the results:
 - a. Certificate Of Analysis Number field – The unique identifier assigned to each certificate of analysis.
 - b. Certificate Of Analysis Date field – The date the certificate of analysis was issued.
 - c. Document Revision field – The file information that helps track and manage different versions of a document as it is updated or changed over time.
 - d. State drop-down – The state of the certificate of analysis:
 - Draft – The transaction is in the draft state.
 - Submit – The transaction has been created.
 - Processing – The application is getting ready to handle incoming

transactions by doing some initial tasks, such as copying the files it receives.

- Processed – The application changes the standard information into a format that is easy to use and specific to your transaction.
- Preparing to Send – The application is getting ready to send out a transaction and is doing some initial tasks, like copying the necessary information for the process.
- Sending –The application sends out business transactions to the buyer or supplier.
- Sent – The transaction is successfully completed and shared with the receiving party.

- e. Customer type-ahead – Displays only if the menu item is Sent Certificates Of Analysis in Manufacturing - Supplier. The name of the company the certificate of analysis was sent to.

If the company name is not present in the Owners master data then the company's name must be entered manually.

- f. Supplier type-ahead – Displays only if the menu item is Received Certificates Of Analysis in Manufacturing - Customer. The name of the company the certificate of analysis was received from.

If the name of the company is not present in the Owner's master data then the company's name must be entered manually.

- g. Last Modified drop-down – The period of time in which the certificate of analysis was last updated:

- Today – The transaction was modified within the last few hours.
- Yesterday – The transaction was updated within the past 24 hours.
- Last Week – The transaction was modified in the last 7 days.
- Last Month – The transaction was modified in the last 30 days.
- Last 3 Months – The transaction was modified in the last 90 days.
- Last 6 Months – The transaction was modified in the last 180 days.

- Custom Range – Select a specific period of time that the transaction was modified in from the calendar.

10. Select Apply.

A list of certificate of analysis displays based on the filter results.

11. Select the link for the certificate of analysis from the results table.

The View Certificates Of Analysis screen displays.

12. To view all fields for each line item, select the View  icon on the Certificates Of Analysis Details screen. .

Reprocess and resubmit certificate of analysis

Reprocess certificate of analysis

After the certificate of analysis is submitted, the user might encounter an error and the processed status will be set to Paused With Error. Use the following procedure to resolve any error messages encountered while submitting certificate of analysis.

1. Select the Main Menu  icon.
2. Select My Networks in the header.
3. Select a [MPL Network] from the Select your Network drop-down in the header.
4. Select a Partner or Location (e.g. your entire company or a Link to a specific Partner or internal location) in the header.
5. Select the Go button.
6. Select Manufacturing - Supplier from the left menu.
 Partners must have the correct roles assigned if using the Owner's instance of Multienterprise Information Network Tower.
7. Select Certificates Of Analysis.

8. Select the Filter  button to find the certificate of analysis in Processing, Processed, Preparing to Send, or Sending state.
9. Select the Certificate of Analysis Number link in the results table.
10. View the following fields for error in the Transaction Information section:
 - Process Status - Displays the status of the submitted transaction.
 - Last Transaction Error - Displays the error message.

11. Select the Edit  button..
12. In the Transaction Information section, select Submitted from the Process Status drop down.

13. Select the Save  button.

The certificate of analysis request is moved from Processing state to Sending state indicating that the certificate of analysis is submitted successfully.

 Do not select the Move To button, as it will cause the transaction to skip a workflow state, preventing successful delivery.

Resubmit certificate of analysis

If a transaction is successfully sent to a partner but an issue occurs on the partner's side (e.g. in their ERP system), the sender can avoid re-entering all the details by rolling back to a previous workflow state and resending the transaction, thus saving time and effort for both parties.

1. Select the Main Menu  icon.
2. Select My Networks in the header.
3. Select a [MPL Network] from the Select your Network drop-down in the header.
4. Select a Partner or Location (e.g. your entire company or a Link to a specific Partner or internal location) in the header.
5. Select the Go button.

6. Select Manufacturing - Supplier from the left menu.



Partners must have the correct roles assigned if using the Owner's instance of Multienterprise Information Network Tower.

7. Select Certificates Of Analysis.

8. Select Certificate of Analysis Number in Sent state.

9. Select the Edit  Edit button.



The state of the certificate of analysis is automatically moved to Sending state.

10. Select the Move To button at the top of the screen.

The submit status indicator circle is filled in with green to indicate the desired action upon selecting save.

11. Select the Save  Save button.

The certificate of analysis is submitted.

The statues of the certificate of analysis moves to Sent state.

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