

TRACELINK UNIVERSITY

Certificate of analysis transactions

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.

The CoA is typically exchanged as structured test results that enable systems to automatically validate quality data. When required for regulatory or legal purposes, the CoA can also include or reference a formal document.

By providing batch-level quality results in a standardized electronic format, the CoA allows customers to verify product compliance, automate validation processes, and support efficient goods receipt, release, and traceability across the supply chain.

Certificate Of Analysis (XML)

The certificate of analysis transaction is a structured test-results message and, when required, as a certificate reference or attachment.

Contact your TraceLink Services representative for more information about integrating with this message.

© TraceLink Inc. 2009 - 2025 All Rights Reserved

- **Message Type**: MPC_CERTIFICATE_OF_ANALYSIS
- **XML Format**: XML E55 Certificate of Analysis
- **Transform Names**:
  - B2B_XML_E55_CertificateOfAnalysis_IB_V1
  - B2B_XML_E55_CertificateOfAnalysis_OB_V1

Guidelines

Input Element	Occurs	Length	Description	Example
controlFileHeader	1...1	-	**Required.** Canonical control file header to store data for control segments of XML transactions.	-
fileSenderNumber	1...1	0/*	**Required.** File control segment or interchange sender identifier.	04027269847409
fileReceiverNumber	1...1	0/*	**Required.** File control segment or interchange receiver identifier.	08027289847487
fileControlNumber	1...1	0/*	**Required.** File control segment or interchange control identifier number.	048477745
fileDateTime	1...1	0/*	**Required.** Date and time message or transaction set created in date format YYYY-MM-DDTHH:MM:SS.sss.	2026-01-15T16:10:25.nnnZ
b2bTransactionTypeName	0...1	0/*	**Required.** B2B transaction type name.	MPC_CERTIFICATE_OF_ANALYSIS
linkIdentifier	0...1	0/*	**Required.** Concatenated value used to identify an incoming transaction. linkIdentifier format is: [Application].[fileSenderNumber].[fileReceiverNumber], ie: MPC_7654389.544234438	MPC.7654389.544234438
FileInformation	1...1	-	**Required.** Canonical file information to store data related to file, like system version, data content version, source system owner, data owner party details, etc.	-
@version	0...1	0/*	**Required.** File information to maintain the version of files after multiple activities.	1.0
EndUserSystemVersion	0...1	0/*	**Required.** System information to maintain the version of system after multiple activities.	1
FilePartyEmail	0...1	0/*	**Required.** Email address of business entity related to that file (shipper, consignee, carrier, forwarder, broker, etc.).	SOMETHING@SUPPLIER.COM
DataPartyEmail	0...1	0/*	**Required.** Email address of business entity related to the content of file (shipper, consignee, carrier, forwarder, broker, etc.).	INFO@SUPPLIER.COM
GenerationDate(1)	1...1	0/*	**Required.** Date on which COA document was generated with all details of tests conducted against defined materials.	2025-06-03
GenerationTime	1...1	0/*	**Required.** Time when COA document was generated with all details of tests conducted against defined materials.	10:37:34
ContentRevision	1...1	0/*	**Required.** Document content revision history to maintain the version of document content after multiple activities.	1
Signature	0...1	-	**Required.** Signing, encoding, algorithm, etc.. Used for signing the document.	-
@Id	0...1	0/*	**Required.** A unique identifier for the digital signature instance applied to the Certificate of Analysis.	1.0
SignedInfo	1...1	-	**Required.** SignedInfo specifies the canonicalization, cryptographic algorithms, and document references that define the integrity and verification rules of a Digital Certificate of Analysis.	-
@Id	0...1	0/*	**Required.** The SignedInfo ID uniquely identifies the exact signature instruction set that is cryptographically signed and verified. It can represent Manufacturer, QA approver or Regualtory board signed information unique identifier.	1
CanonicalizationMethod	1...1	-	**Required.** Canonicalization or Normalization of file information to store data related to file, like system version, data content version, source system owner, data owner party details, etc.	-
@Algorithm	1...1	0/*	**Required.** Algorithm followed for canonicalisation or it rules followed to normalize XML / JSON files before hashing.	http://www.w3.org/TR/2001/REC-xml-c14n-20010315
*body	0...1	0/*	**Required.** Free form description, if any required to be explained for canonicalization.	-
XSANY	0...1	0/*	**Required.** Any other description.	-
SignatureMethod	1...1	-	**Required.** Signature methods followed to sign the information.	-
@Algorithm	1...1	0/*	**Required.** Algorithm followed for generating signature for signing generated document. For example: RSA, DSA, ECDSA, etc.	http://www.w3.org/2000/09/xmldsig#dsa-sha1
*body	0...1	0/*	**Required.** Free form description, if any required to be explained for canonicalization.	-
HMACOutputLength	0...1	0/*	**Required.** HMAC output length.	-
XSANY	0...1	0/*	**Required.** Any other description.	-
Reference	1...*	-	**Required.** Digital Signature signing references like URI, identifiers, algorithm, etc.	-
@Id	0...1	0/*	**Required.** Signing Authority Identifier.	-
@URI	0...1	0/*	**Required.** Unfirm resource Identifier for signing methods and references.	-
@Type	0...1	0/*	**Required.** There are different types of signing references available for digital certificate of analysis. Valid values: • `TRANSFORMS` - Signing based on transforms or pre-processing step before signing. • `DIGEST` - Signing based on hash algorithm.	TRANSFORMS
DigestValue	1...1	0/*	**Required.** Digest value. Based on digest value final approval is provided to COA document.	Encrypted format like: lrv8wdIADLzdQp2MPH+FYGv5tQE=
Transforms	0...1	-	**Required.** Algorithm followed for signing in the signature for transforms method.	-
Transform	1...*	-	**Required.** Algorithm followed for signing in the signature for transforms method.	-
@Algorithm	1...1	0/*	**Required.** Algorithm followed for signing in the signature for transforms method.	http://www.w3.org/2000/09/xmldsig#enveloped-signature
*body	0...1	0/*	**Required.** Free form description.	-
choice%1	0...*	-	Different type of choice either in form of description or XPATH to handle transform mechanism.	-
XSANY	0...1	0/*	**Required.** Free form data.	-
Xpath	0...1	0/*	**Required.** XPATH.	-
DigestMethod	1...1	-	**Required.** Algorithm followed for signing in the signature for digest method.	-
@Algorithm	1...1	0/*	**Required.** Algorithm followed for signing in the signature for digest method.	http://www.w3.org/2000/09/xmldsig#sha1
*body	0...1	0/*	**Required.** Free form data.	-
XSANY	0...1	0/*	**Required.** Free form data.	-
SignatureValue	1...1	-	**Required.** Digital signature Value. SignedInfo ID is used to produce SignatureValue.	-
@Id	0...1	0/*	**Required.** Free form description related to signature.	1
*body	0...1	0/*	**Required.** Digital signature Value. SignedInfo ID is used to produce SignatureValue.	RHjAZ9knn0iVIRnuEJ+/8KMyFd5m+0ULCbd8/mdJMPtZ4fc1i+hEig==
KeyInfo	0...1	-	**Required.** Digital certificate or key selection criteria.	-
@Id	0...1	0/*	**Required.** Certificate or key identifier.	1
*body	0...1	0/*	**Required.** Free form data.	-

© TraceLink Inc. 2009 - 2025 All Rights Reserved

Input Element	Occurs	Length	Description	Example
choice%1	1...*	-	**Required.** There are different methods to handle signature. Users will have options to select based on their requirement. Only one from below mentioned will be used at a time. Valid values: • RSAKEY - RSA key pair • DSAKEY - DSA key pair • PGPKEY - PGP Key Pair • RETRIEVALMETHOD - Anonymous certificate or key retrieval • X509 - X509 Certificate • SPKI - Subject public key information • OTHER - Any other type of method used for signature	-
KeyName	0...1	0/*	**Required.** Name of Key Pair.	CUST1234
MgmtData	0...1	0/*	**Required.** It contains administrative or operational information about the cryptographic key used for the signature.	-
XSANY	0...1	0/*	**Required.** Free form data.	-
KeyValue	0...1	-	**Required.** Raw public key.	-
*body	0...1	0/*	**Required.** Free form data for raw public key.	-
XSANY	0...1	0/*	**Required.** Free form data.	-
DSAKeyValue	0...1	-	**Required.** P, Q, and G define the DSA cryptographic domain; Y is the public key. J provides verification that the domain parameters were correctly constructed. Sequence of key pair is critical P ==> Q ==> G / Y / J / X ===> Seed ===> PgenCounter	-
G	0...1	0/*	**Required.** A number derived from P and Q. Generates a subgroup of size Q within modulo P. Ensures all operations stay within a secure subgroup.	T5lZErFH03pYxf13Vpd9gabTNLVNh/lTlVXU/qJz2SXGGcYXhjVSgcBw9f1EqL9QH9yIKpwIKR856A34e3rKVGWSnR4CHvMwy3LYJr6C8mzLM6gN3Nt/BwAA6ufq8vT5glthmHpZndQtqYLbTkNUhvTYLhoQdHMnzuRNJPB+CNQ=
Y	1...1	0/*	**Required.** It is used by verifiers to validate signatures. It is shared publicly.	W2sJss7st0hxuupfDUgfp0c8zpee3T907h+lm+7N5xLQoQEMNzbAux0mv/X1T8JdZoadKsHT0B5lYhkOIAHbmQC00wRe5TmyFi9alyOA6RdPMyq2YygnH0knT7pFaMQHQfMaQMqNIJ3Lf8VvYOxCy+36F4vfokoRp1exyOV9wmk=
J	0...1	0/*	**Required.** Used to verify that G is correctly generated. It is not required for signing or verification.	W2sJss7st0hxuupfDUgfp0c8zpee3T907h+lm+7N5xLQoQEMNzbAux0mv/X1T8JdZoadKsHT0B5lYhkOIAHbmQC00wRe5TmyFi9alyOA6RdPMyq2YygnH0knT7pFaMQHQfMaQMqNIJ3Lf8VvYOxCy+36F4vfokoRp1exyOV9wmk=
X	0...1	0/*	**Required.** It is a private to the system, part of key pair. Never shared with any other business partner.	-
sequence%1	0...1	-	**Required.** Key encryption and decryption handling for DSA key pair value.	-
P	1...1	0/*	**Required.** A large prime number, defines the finite field where DSA operates. It is mandatory for DSA.	w6DOY9NhgXXfr1rs/2Gb3WAlLGmhp/78SXSTOpQX8UlwZiY58RL+G3mhFLNWC+9OXEs+u9561dy9Plzd9//DSpU9zB8N3xEZfkyzLfGkAGg0s2iroD4XGglSgT5BNyYRkkh/h6+8y5rOKBng9wXGA0G9cW7r23QcCAkq6F2tE3s=
Q	1...1	0/*	**Required.** A prime divisor of P, but much smaller than P, it determines signature size and security. It is mandatory for DSA.	oz4AbnoBLg32Euqt0bDtez0uFtM=
sequence%2	0...*	-	-	-
Seed	1...1	0/*	**Required.** Random value used to generate q.	MTIzNDU2Nzg5MDEyMzQ1Ng==
PgenCounter	1...1	0/*	**Required.** Iteration count during key pair generation.	MTIzNDU2Nzg5MDEyMzQ1Ng==
RSAKeyValue	0...1	-	**Required.** RSA key pair information to handle encryption, decryption, key generation and validation.	-
Modulus	1...1	0/*	**Required.** The modulus is the large composite number in an RSA key that defines the cryptographic domain and determines the key's security strength.	w6DOY9NhgXXfr1rs/2Gb3WAlLGmhp/78SXSTOpQX8UlwZiY58RL+G3mhFLNWC+9OXEs+u9561dy9Plzd9//DSpU9zB8N3xEZfkyzLfGkAGg0s2iroD4XGglSgT5BNyYRkkh/h6+8y5rOKBng9wXGA0G9cW7r23QcCAkq6F2tE3s=
Exponent	1...1	0/*	**Required.** The RSA exponent is the power applied in modular arithmetic that enables encryption, decryption, signing, and verification in RSA cryptography.	w6DOY9NhgXXfr1rs/2Gb3WAlLGmhp/78SXSTOpQX8UlwZiY58RL+G3mhFLNWC+9OXEs+u9561dy9Plzd9//DSpU9zB8N3xEZfkyzLfGkAGg0s2iroD4XGglSgT5BNyYRkkh/h6+8y5rOKBng9wXGA0G9cW7r23QcCAkq6F2tE3s=
RetrievalMethod	0...1	-	**Required.** Anonymous certificate and key retrieval method to retrieve key / certificate information from target server to handle encryption, decryption, key generation and validation.	-
@URI	0...1	0/*	**Required.** The URI in a RetrievalMethod identifies the location of cryptographic key material required for signature verification.	-
@Type	0...1	0/*	**Required.** Certificate or key retrieval type.	-
Transforms	0...1	-	**Required.** Algorithm followed for signing in the signature for transforms method.	-
Transform	1...*	-	**Required.** Algorithm followed for signing in the signature for transforms method.	-
@Algorithm	1...1	0/*	**Required.** The transform algorithm in a RetrievalMethod defines the processing steps required to normalize and extract cryptographic key material from a referenced resource before signature verification.	-
*body	0...1	0/*	**Required.** Free form data	-
choice%1	0...*	-	Different type of choice either in form of description or XPATH to handle transform mechanism.	-
XSANY	0...1	0/*	**Required.** Free form data	-
Xpath	0...1	0/*	**Required.** XPATH	-
X509Data	0...1	-	**Required.** X509 certificate information to handle encryption, decryption, key generation and validation.	-
sequence%1	1...*	-	**Required.**	-
choice%1	1...1	-	**Required.** Different type of choice either in form of certificate to be chosen.	-
X509SKI	0...1	0/*	**Required.** 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	-
X509SubjectName	0...1	0/*	**Required.** The Subject Name is the distinguished identity of the entity that owns the public key in an X.509 certificate.	-
X509Certificate	0...1	0/*	**Required.** A digital certificate establishes trust by binding a verified identity to a public key used for secure communication and signature verification.	-
X509CRL	0...1	0/*	**Required.** 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.	-
X509IssuerSerial	0...1	-	**Required.** X509 certificate issuer serial number and name information.	-
X509IssuerName	1...1	0/*	**Required.** The certificate issuer name identifies the Certificate Authority that issued and signed the digital certificate.	-
X509SerialNumber	1...1	0/*	**Required.** The certificate serial number uniquely identifies a digital certificate issued by a Certificate Authority and is used for revocation and audit purposes.	-
PGPData	0...1	-	**Required.** PGP information in a Digital CoA consists of the keys, signatures, and metadata used to authenticate the issuer and protect the integrity (and optionally confidentiality) of the certificate.	-
sequence%1	0...1	-	**Required.**	-
PGPKeyID	1...1	0/*	**Required.** A PGP Key ID is a fingerprint-derived identifier used to reference the public key that signs or verifies a Digital Certificate of Analysis.	-
PGPKeyPacket	0...1	0/*	**Required.** A PGP key packet is a structured OpenPGP data unit that carries key material, identity, or signatures and collectively forms a usable PGP key.	-
sequence%2	0...1	-	**Required.**	-
PGPKeyPacket	1...1	0/*	**Required.** A PGP key packet is a structured OpenPGP data unit that carries key material, identity, or signatures and collectively forms a usable PGP key.	-
SPKIData	0...1	-	**Required.** Subject Pblic Key Information (SPKI) key in a Digital CoA is the standardized public key representation used to verify the document's digital signature.	-
sequence%1	1...*	-	**Required.**	-
SPKISexp	1...1	0/*	**Required.** The RSA exponent is the power applied in modular arithmetic that enables encryption, decryption, signing, and verification in RSA cryptography.	-
XSANY	0...1	0/*	**Required.** Free form data	-
Object	0...*	-	Additonal Signing and Encoding Information, if any required during XML or JSON file integration.	-
@Id	0...1	0/*	**Required.** Signing Authority Identifier.	1
@MimeType	0...1	0/*	**Required.** Mime Type used for singing, like type of hash or signing algorithm used. Content of this attribute will be considered as base64 binary data. Below mentioned type of documents can be incorporated with COA document: • PDF Document • CSV encrypted document • XML encrypted document	1
@Encoding	0...1	0/*	**Required.** Signature Encoding mechanism, it includes permutation and combination of different bits of key, respective algorithm for encryption and decryption.	1
*body	0...1	0/*	**Required.** Free form text, to mention any remarks around addition signing and encoding parameters.	-
sequence%1	0...*	-	-	-
XSANY	0...1	0/*	**Required.** Free form data.	2025-06-03
Comments	1...1	-	**Required.** Any type of description required at header.	-
*anybody	0...1	0/*	**Required.** Free form description	Free form Description
MaterialDataGroup	1...1	-	**Required.** Line item details for the digital certificate of analysis. Line item level describes types of tests, materials, specifications, quantity, etc.	-
MaterialData	0...*	-	Material Information to store the data related to materials being tested or reported.	-
@MaterialDataLotID	0...1	0/*	**Required.** Manufacturer lot number.	L100
@MaterialDataLotRef	0...1	0/*	**Required.** Customer lot number.	CUST100
QualitySignature	0...1	0/*	**Required.** Quality Control Authority, provides final approval.	Jane Doe
ProductName	1...1	0/*	**Required.** Name of the material to be tested and certified.	Material -0-001
PartNumber	1...1	0/*	**Required.** Material Part Number.	MN-001

© TraceLink Inc. 2009 - 2025 All Rights Reserved

Input Element	Occurs	Length	Description	Example
Quantity	0...1	0/*	**Required.** Total quantity of material for which tests performed.	10
QuantityUOM	0...1	0/*	**Required.** Material unit of measure, for each lot numbers for performing tests.	KG
Manufacturer	1...1	-	**Required.** Manufacturer details to understand, where material was manufactured, which party shared material for testing.	-
@Type	0...1	0/*	**Required.** There are different types of manufacturers considered for materials from which materials are expected for testing. Valid values: • `DISTRIBUTOR` - Material Distributor • `MANUFACTURER` - Material Manufacturer Passthrough mapping.	DISTRIBUTOR
@Level	1...1	0/*	**Required.** Hierarchy of manufacturer for specified product. Note for understanding: • 0 - Main Manufacturer or Direct Supplier • 1 - Distributor or substitute supplier location • 2 - Retailer	0
@Plant	0...1	0/*	**Required.** Plant within which material was manufactured.	Plant1
*body	0...1	0/*	**Required.** Free form description.	SUPPLIER A
Lot	1...1	-	**Required.** Lot date information to understand expiry, manufacturing, received, etc.	-
@LotDate	1...1	0/*	**Required.** Manufacturing date of complete lot or batch.	2016-02-24
@ManufactureReceive	0...1	0/*	**Required.** Date on which batch received for testing.	MfgDate
@ExpDate	0...1	0/*	**Required.** Expiry date for complete lot.	22-02-2018
*body	0...1	0/*	**Required.** Manufactured product lot related description.	L0-1234567
MaterialParameters	0...1	-	**Required.** Specifications of materials on which different types of testing were performed.	-
MaterialParameter	0...*	-	Specifications of materials on which different types of testing were performed.	-
Name	1...1	0/*	**Required.** Short description of material.	Assay123
Description	0...1	0/*	**Required.** Free form text, so if any other details to be specified for material, can be mentioned.	USP-Assay123 (Material-0-001) (dried basis), horizontal
MeasurementAttribute	0...1	0/*	**Required.** A test of attribute is an evaluation performed to confirm that a defined material or component characteristic complies with specified acceptance criteria.	StrengthTest
MeasurementVariable	0...1	0/*	**Required.** Criteria used to inspect or qualify for test. For example: Minimum, maximum, mean, etc.	Mean
UnitOfMeasure	0...1	0/*	**Required.** Material parameter unit of measure, for each lot numbers for performing tests.	N
Method	0...1	0/*	**Required.** Method defined by supplier, for specified material measurement conducted.	METH-001
MeasurementType	0...1	0/*	**Required.** Specifies the relational condition used to evaluate a measured result against its acceptance criteria. For example: LT (less than), EQ (equal to), LTE (less than or equal to), etc.	EQ
MeasurementValue	0...1	0/*	**Required.** Test result value. Only numeric values are accepted.	4.5
MeasurementText	0...1	0/*	**Required.** Description related to test results. Test results value will sppear with symbols in data character field.	4.5
MeasurementTestLot	0...1	0/*	**Required.** Identifier used for test execution, to track information related to test results.	MTL-001
SpecificationNumber	0...1	0/*	**Required.** Identifier of test specification document.	SPEC-001
Specification	0...1	0/*	**Required.** Free form text for test specification document in brief.	4.0-6.0
SampleLocation	0...1	0/*	**Required.** Material sample collection location, to specify source of truth to be specified in test specification and result document as reference.	Top

Example

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ASTMeDataXchange xmlns="https://www.astm.org/e55edataxchange">
    <controlFileHeader>
<b2bTransactionTypeName>DSCSA_SHIPMENT_NOTICE</b2bTransactionTypeName>
        <fileControlNumber>TLUS20260401-00098765£</fileControlNumber>
        <fileDateTime>2026-04-01T14:32:45Z</fileDateTime>
        <fileReceiverNumber>0034567890123</fileReceiverNumber>
        <fileSenderNumber>0087654321098</fileSenderNumber>
        <linkIdentifier>550e8400-e29b-41d4-
a716-446655440000</linkIdentifier>
    </controlFileHeader>
    <FileInformation version="1.0">
        <ContentRevision>1</ContentRevision>
<DataPartyEmail>serialization.ops@acmepharma.com</DataPartyEmail>
        <EndUserSystemVersion>1</EndUserSystemVersion>
<FilePartyEmail>b2b.integration@acmepharma.com</FilePartyEmail>
        <GenerationDate>2026-04-01</GenerationDate>
        <GenerationTime>00:20:22</GenerationTime>
        <Signature xmlns="http://www.w3.org/2000/09/xmldsig#" id="1">
            <SignedInfo id="1">
                <CanonicalizationMethod
Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315">
                    Free Form Text - 1
                    <XSANY>Any Other Description - 1</XSANY>
                </CanonicalizationMethod>
                <SignatureMethod
```

© TraceLink Inc. 2009 - 2025 All Rights Reserved

```
Algorithm="http://www.w3.org/2000/09/xmldsig#dsa-sha1">
                    Free Form Text - 2
                    <HMACOutputLength>15</HMACOutputLength>
                    <XSANY>Any Other Description - 2</XSANY>
                </SignatureMethod>
                <Reference id = "1" URI="" type="TRANSFORMS">
<DigestValue>YzQ1NmFiY2RlZjEyMzQ1Njc4OTA=</DigestValue>
                    <Transforms>
                        <Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature">
                            Free Form Text - 3
                            <XSANY>Any Other Description - 3</XSANY>
                        </Transform>
                    </Transforms>
                    <DigestMethod
Algorithm="http://www.w3.org/2000/09/xmldsig#sha1">
                        <body>Free Form Text - 4</body>
                        <XSANY>Any Other Description - 4</XSANY>
                    </DigestMethod>
                </Reference>
            </SignedInfo>
            <SignatureValue
id="2">QWxhZGRpbjpPcGVuU2VzYW1lU2lnbmF0dXJlVmFsdWU=</SignatureValue>
            <KeyInfo id = "3">
                <KeyName>CUST1234</KeyName>
                <KeyValue>
                    <XSANY>Any Other Description - 5</XSANY>
                    <DSAKeyValue>
<G>AbCdEfGhIjKlMnOpQrStUvWxYz0987654321abcdefghijklmnopqrstuv==</G>
<Y>ZxYwVuTsRqPoNmLkJiHgFeDcBa1234567890abcdefghijklmnopqrst==</Y>
<J>'W2sJss7st0hxuupfDUgfp0c8zpee3T907h+Im+7N5xLQoQEMNzbAux0mv/X1T8JdZo
adKsHT0B5lYhkOIAHbmQC00wRe5TmyFi9aIyOA6RdPMyq2YygnH0knT7pFaMQHQfMaQMqN
IJ3Lf8VvYOxCy+36F4vfokoRp1exyOV9wmk=</J>
                        <X></X>
<P>8v9Kx7LmQp2Rt5UwYz6AbCdEfGhIjKlMnOpQrStUvWxYz1234567890abcdefgHIJKL
mnopQRsTuvWxYz==</P>
                        <Q>nZ8YxWvUtSrQpOnMlKjIhGfEdCbA9876543210=</Q>
                        <Seed>U2VyaWFsaXphdGlvbjIwMjY=</Seed>
                        <PgenCounter>MjAyNjA0MDE=</PgenCounter>
                    </DSAKeyValue>
                    <RSAKeyValue>
<Modulus>w6DOY9NhgXXfr1rs/2Gb3WAlLGmhp/78SXSTOpQX8UlwZiY58RL+G3mhFLNWC
+9OXEs+u9561dy9PIzd9//DSpU9zB8N3xEZfkyzLfGkAGg0s2iroD4XGgISgT5BNyYRkkh
/h6+8y5rOKBng9wXGA0G9cW7r23QcCAkq6F2tE3s=</Modulus>
<Exponent>w6DOY9NhgXXfr1rs/2Gb3WAlLGmhp/78SXSTOpQX8UlwZiY58RL+G3mhFLNW
C+9OXEs+u9561dy9PIzd9//DSpU9zB8N3xEZfkyzLfGkAGg0s2iroD4XGgISgT5BNyYRkk
```

© TraceLink Inc. 2009 - 2025 All Rights Reserved

```
h/h6+8y5rOKBng9wXGA0G9cW7r23QcCAkq6F2tE3s=</Exponent>
                    </RSAKeyValue>
                </KeyValue>
                <RetrievalMethod URI="" Type="">
                    <Transforms>
                        <Transform
Algorithm="http://www.w3.org/2000/09/xmldsig#sha1">Free Form Text - 6
                            <XSANY>Any Other Description - 6</XSANY>
                        </Transform>
                    </Transforms>
                </RetrievalMethod>
                <X509Data>
<X509SKI>dGhpcy1pcy1zYW1wbGUtc2tpLTEyMzQ1Ng==</X509SKI>
                    <X509SubjectName>CN=acmepharma.com,
OU=Serialization, O=Acme Pharma Inc, L=Princeton, ST=New Jersey,
C=US</X509SubjectName>
                    <X509Certificate>
MIIDdzCCAl+gAwIBAgIEbG9jYWwwDQYJKoZIhvcNAQELBQAwVTELMAkGA1UEBhMCVVMx
EzARBgNVBAgMCk5ldyBKZXJzZXkxFDASBgNVBAoMC0FjbWUgUGhhcm1hMRYwFAYDVQQD
DA1hY21lcGhhcm1hLmNvbTAeFw0yNjA0MDEwMDAwMDBaFw0yNzA0MDEwMDAwMDBaMFUx
CzAJBgNVBAYTAlVTMRMwEQYDVQQIDApOZXcgSmVyc2V5MRQwEgYDVQQKDAtBY21lIFBo
YXJtYTEWMBQGA1UEAwwNYWNtZXBoYXJtYS5jb20wggEiMA0GCSqGSIb3DQEBAQUAA4IB
                        DwAwggEKAoIBAQC7examplecertificatebase64data==
                    </X509Certificate>
                    <X509CRL>
MIIBYDCBygIBATANBgkqhkiG9w0BAQsFADBVMQswCQYDVQQGEwJVUzETMBEGA1UE
CAwKTmV3IEplcnNleTEUMBIGA1UECgwLQWNtZSBQaGFybWExFjAUBgNVBAMMDWFj
bWVwaGFybWEuY29tFw0yNjA0MDEwMDAwMDBaFw0yNjA1MDEwMDAwMDBaMA0GCSqG
                        SIb3DQEBCwUAA4IBAQBexamplecrldata==
                    </X509CRL>
                    <X509IssuerSerial>
                        <X509IssuerName>CN=Acme Pharma Root CA, O=Acme
Pharma Inc, C=US</X509IssuerName>
<X509SerialNumber>45897632104589763210</X509SerialNumber>
                    </X509IssuerSerial>
                </X509Data>
                <PGPData>
                    <PGPKeyID>4A5B6C7D8E9F0123</PGPKeyID>
                    <PGPKeyPacket>
mQENBFuExamplePGPKeyPacketBase64Data1234567890==
                    </PGPKeyPacket>
                </PGPData>
                <SPKIData>
                    <SPKISexp>
MIIBCgKCAQEAuExampleSPKIBase64EncodedValue123456789==
                    </SPKISexp>
```

© TraceLink Inc. 2009 - 2025 All Rights Reserved

```
                    <XSANY>CustomSPKIExtensionValue</XSANY>
                </SPKIData>
            </KeyInfo>
            <Object id="BatchRelease20260401"
                    MimeType="text/xml"
Encoding="http://www.w3.org/2000/09/xmldsig#base64">
                <XSANY>
QmF0Y2ggUmVsZWFzZSBEb2N1bWVudCBEYXRhIC0gQWNtZSBQaGFybWEgMjAyNg==
                </XSANY>
            </Object>
        </Signature>
    </FileInformation>
    <Comments>STR</Comments>
    <MaterialDataGroup>
        <MaterialData MaterialDataLotID="LOT20260315A01"
MaterialDataLotRef="PO45897632">
            <PartNumber>00312345678901</PartNumber>
            <ProductName>Atorvastatin Calcium Tablets
20mg</ProductName>
            <Quantity>250000</Quantity>
            <QuantityUOM>EA</QuantityUOM>
            <Manufacturer Level="1" Plant="US-NJ-PLT01"
Type="Manufacturer">
                Acme Pharma Manufacturing Inc.
            </Manufacturer>
            <Lot ExpDate="2028-03-31" LotDate="2026-03-15"
ManufactureReceive="MfgDate">
                BATCH-2026-0315-A01
            </Lot>
            <MaterialParameters>
                <MaterialParameter>
                    <Description>Assay of Active Ingredient
(Atorvastatin Calcium)</Description>
<MeasurementAttribute>Potency</MeasurementAttribute>
<MeasurementTestLot>QC-20260320-01</MeasurementTestLot>
                    <MeasurementText>Within
specification</MeasurementText>
                    <MeasurementType>Assay</MeasurementType>
                    <MeasurementValue>99.85</MeasurementValue>
                    <MeasurementVariable>Result</MeasurementVariable>
                    <Method>HPLC-UV Method USP &amp;lt;621&amp;gt;</Method>
                    <Name>API Assay</Name>
                    <SampleLocation>Finished Product - Packaging Line
2</SampleLocation>
                    <Specification>98.0% - 102.0%</Specification>
                    <SpecificationNumber>SPEC-API-
```

© TraceLink Inc. 2009 - 2025 All Rights Reserved

```
ATV-001</SpecificationNumber>
                    <UnitOfMeasure>%</UnitOfMeasure>
                </MaterialParameter>
                <MaterialParameter>
                    <Description>Total Aerobic Microbial
Count</Description>
                    <MeasurementAttribute>Microbial
Limit</MeasurementAttribute>
<MeasurementTestLot>QC-20260320-02</MeasurementTestLot>
                    <MeasurementText>Complies</MeasurementText>
                    <MeasurementType>Microbiology</MeasurementType>
                    <MeasurementValue>10</MeasurementValue>
                    <MeasurementVariable>TAMC</MeasurementVariable>
                    <Method>USP &lt;61&gt;</Method>
                    <Name>Microbial Test</Name>
                    <SampleLocation>QC Laboratory</SampleLocation>
                    <Specification>NMT 100 CFU/g</Specification>
                    <SpecificationNumber>SPEC-
MICRO-004</SpecificationNumber>
                    <UnitOfMeasure>CFU/g</UnitOfMeasure>
                </MaterialParameter>
            </MaterialParameters>
<QualitySignature>QA_RELEASE_20260325_JSMITH</QualitySignature>
        </MaterialData>
    </MaterialDataGroup>
</ASTMeDataXchange>
```


Review TraceLink's **API: Terms of Use**

Related Content

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.
View More

Certificate of analysis canonical guidelines

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.
View More

© TraceLink Inc. 2009 - 2025 All Rights Reserved

Motor carrier load tender canonical guidelines

The Motor Carrier Load Tender is an electronic transaction used by a shipper or third-party logistics provider (3PL) to offer a shipment to a motor carrier for transportation.
View More

© TraceLink Inc. 2009 - 2025 All Rights Reserved