



UN/CEFACT

SIMPLE, TRANSPARENT AND EFFECTIVE PROCESSES
FOR GLOBAL BUSINESS

BUSINESS REQUIREMENTS SPECIFICATION (BRS)

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Business process: e-LABs observation report

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Date of change	Version	Paragraphs changed	Summary of changes
Nov 2 2011	0.1	Initial document	In Dutch language
Feb, 2012	0.3	All	Update diagrams and classes definitions. In English language.
June, 2012	0.4	5.5 and 5.6	Update class diagram, Add Commemoratifs and Water
Nov, 2012	0.9	5.5 and 5.6 Class diagram ABIEs, BBIEs and ASBIEs	Update to the results of harmonization process. Naming and definitions. Add Instructions. Include ASBIE tables
Dec, 2012	0.91	Class diagram	Update
Oct, 2013	0.92	All	Add Laboratory Analysis Request and Acknowledgement
Nov, 2013	0.93	All	Update
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Business Requirements Specification

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1 Preamble

The objectives of this document is

- Harmonization of the definitions of the technical data in order:
 - to speak the same language
 - to be able to exchange information between heterogeneous information systems
- Development of consensual data dictionaries which could to be used as a basis for all use in laboratory observation reports in the agriculture domain
- Installation of standardized laboratory observation reporting messages to facilitate the transmission of information between the users of the reported observations and the observation institute (laboratory).
- Installation of a standardized laboratory observation reporting message to facilitate the transmission of information between the observation institute (laboratory) and the users of the reported observations.
- Development and implementation of an electronic laboratory analysis request, observation report and laboratory acknowledgement message.

The purpose of this document is to define the laboratory observation exchange processes for all users in the agro domain of laboratory observations and the development and installation of standard reporting messages, using the UN/CEFACT Modeling Methodology (UMM) approach and Unified Modeling Language to describe and detail the business processes and transactions involved.

The structure of this document is based on the structure of the UN/CEFACT Business Requirements Specification (BRS) document reference CEFACT/ICG/005.

2 References

UN/CEFACT Modelling Methodology User Guide (CEFACT/TMG/N093)

UN/CEFACT Business Requirement Specification Document Template (CEFACT/ICG/005)

UN/CEFACT E-CERT BRS

UN/CEFACT E-DAPLOS BRS

UN/CEFACT CRIE cattle registration and information exchange BRS

UN/CEFACT agricultural observations BRS

3 Objective

The objective of this document is to standardize the Business Processes, the Business Transactions and the Information Entities of the technical description and information of an agricultural laboratory observation.

The Business Process is the detailed description of the way partners intend to play their respective role, establish business relationship and share responsibilities to interact efficiently with the support of their respective information system.

The business documents are composed of Business Information Entities (BIE), which when available, are taken from the library of reusable business information entities and when not found, are proposed as new Business Information Entities. The contents of the business documents and the Business Information Entities are presented using class diagrams.

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4 Scope

This section describes the extent and limits of the business process within the information chain being described in this document. The class diagram of the e-Labs observation request and report has been developed to specify exchange of information to enable business information to be re-used. It includes business information entities specifically required by the different users of observation reports in trading of agriculture products, plant health, and animal health. It covers the usage for the different roles the users can perform.

Categories	Description and Values
Business Process	Laboratory analysis and observation reports
Product Classification	Laboratory observations data
Industry Classification	Agricultural sector
Geopolitical	Global
Official Constraint	European Regulations National regulation Local applicable regulation
Business Process Role	Exchange observation data
Supporting Role	None
System Capabilities	Agreed level of security to protect data integrity Agreed level of standard laboratory observation methods and technology applied.

The laboratory observation information exchange process is used between the laboratory party and their business parties. In this phase two cases are in scope. The first case is the information exchange between the analysis ordering party and the laboratory, about the request for observations. The second case covers the information exchange between the laboratory and the report receiving party about the report of the observations. This report receiving party is usually the party who uses the content of the report, but this user can also be the party who ordered and pays for the observation or has any other connection with the observation report.

The laboratory analysis request and observation report can be used in private and in a public context.

5 Business requirements

5.1 Business requirements view

The e-Labs analysis request is a message send by the party ordering one or more analyzes on the sample to be performed by the laboratory. The e-Labs observation report is a message send by the laboratory to the concerned parties who are eligible to receive the results of the observations on the sample, performed by the laboratory. The observations are done on samples water, soil, agricultural commodities, plant products, animal products and or samples taken from live animals. It includes a broad usage ranging from soil, fertilizer, crop products, animal feed, and health status and diagnostic on live animals. These results are used to obtain information of the quality of soil, water, crop products, animal products, or health information about plants or animals.

Only three types of parties are involved, the laboratory, the requesting and receiving parties.

5.2 Business process elaboration

Use case description e-Labs analysis request

Business process name	e-Labs analysis request
Identifier	e-Labs
Actors	Laboratories, authorities, traders, transporters, consultancy, farmers, finance and insurance agencies
Description	The trade party sends the laboratory analysis request to the laboratory.
Pre-condition	No obligation to set up a precondition
Post-conditions	Success: the trade party sends the laboratory analysis request.
Scenarios	Send laboratory analysis request.
Remarks	

Use case diagram

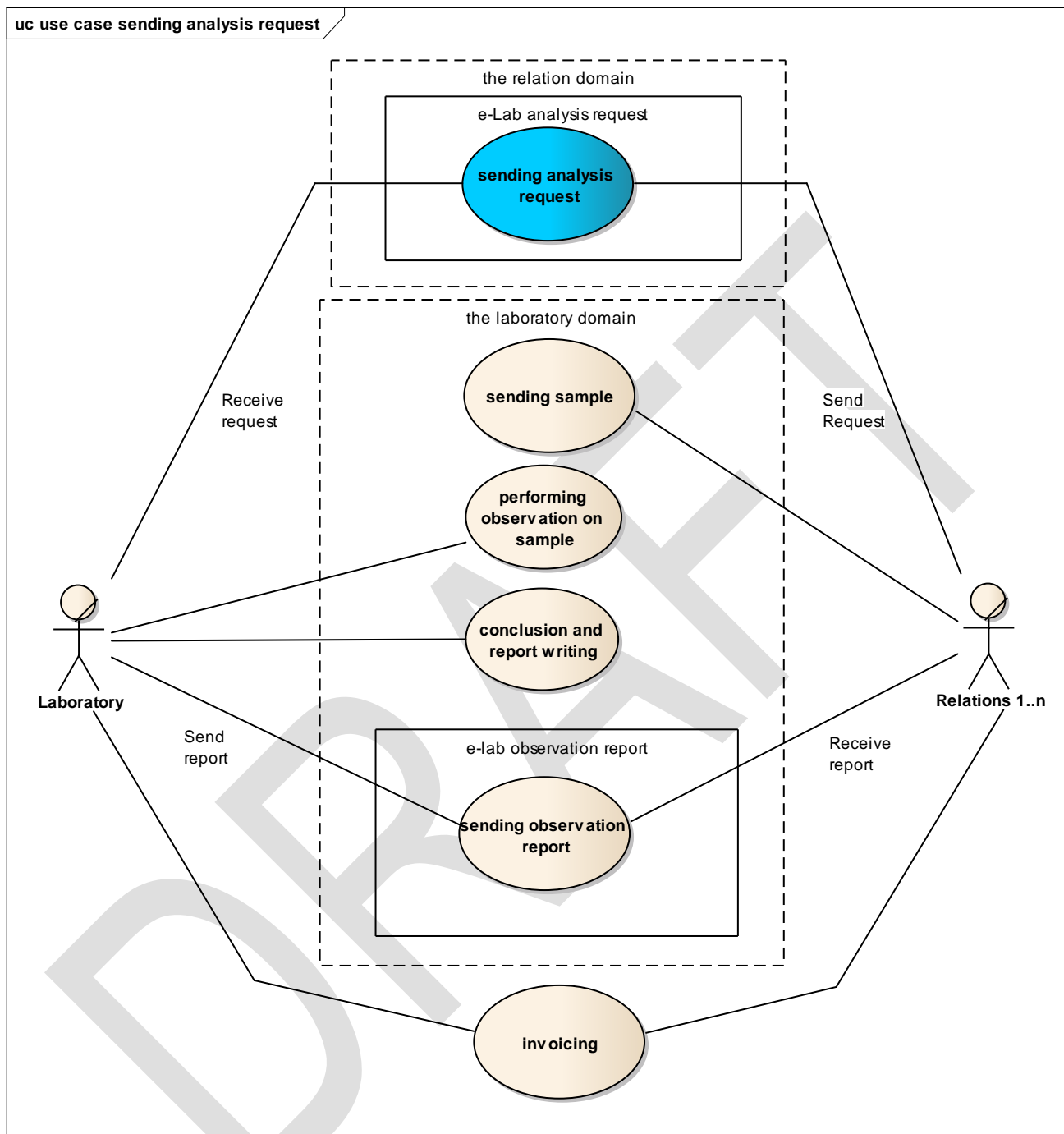


Figure 1 Use case diagram sending the laboratory analysis request message

Use case description e-Labs observation report

Business process name	e-Labs observation report
Identifier	e-Labs
Actors	Laboratories, authorities, traders, transporters, consultancy, farmers, finance and insurance agencies
Description	The laboratory sends the observation report to the dedicated party (parties)
Pre-condition	No obligation to set up a precondition
Post-conditions	Success: the laboratory sends the observation report.
Scenarios	Send observation report.
Remarks	

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Use case diagram

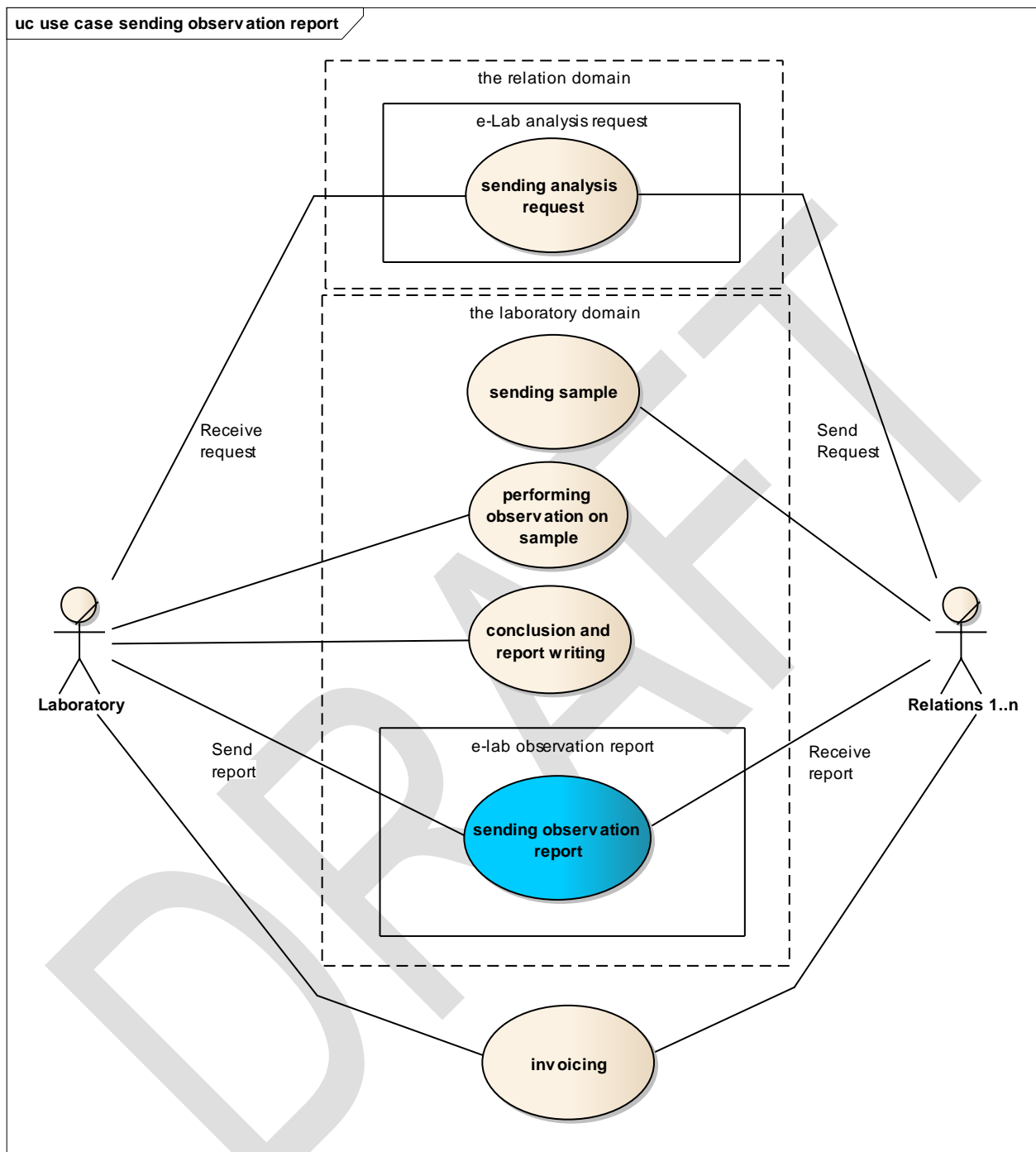


Figure 2 Use case diagram sending the laboratory observation report message

The e-Labs XML information exchange

The activity diagram allows identifying all the significant information flows between the observation agency (laboratory) and their partners.

Activity diagram description:

The complete activity schema of all activities related to the sampling observation chain involves many activities, and many parties are related. It starts with the laboratory analysis request, with taking a sample, sending in the sample to the laboratory, performing several administrative and technical activities within the laboratory, and informing the dedicated relations about the results of the observations. And finally the process ends with sending an invoice and get paid for the observation.

This use cases only concerns about the sending the laboratory analysis request and sending of the laboratory observation results to the dedicated parties who are in need to receive a copy of the observation results. All other interactions between the laboratory and the business parties are out of scope. There is an option to send an acknowledgement message in reply of the request message or the report message. In that option the e-Labs laboratory acknowledge message will be used.

Business collaboration

Business collaboration	
Identifier	e-Labs analysis request
Description	The Relation sends an analysis request to the Laboratory.
Partners types	The laboratory, Business partners as authorities, traders, transporters, consultancy, farmers, finance and insurance agencies
Authorized Roles	The laboratory
Legal Steps/Requirement	None
Economic consequences	None
Initial/Terminal Events	None
Scope	None
Boundary	None
Constraints	None

Business collaboration	
Identifier	e-Labs observation report
Description	The Laboratory sends an observation report to one or more dedicated parties.
Partners types	The laboratory, Business partners as authorities, traders, transporters, consultancy, farmers, finance and insurance agencies

Authorized Roles	The laboratory
Legal Steps/Requirement	None
Economic consequences	None
Initial/Terminal Events	None
Scope	None
Boundary	None
Constraints	None

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5.3 Information flow definition

Sequence Diagram

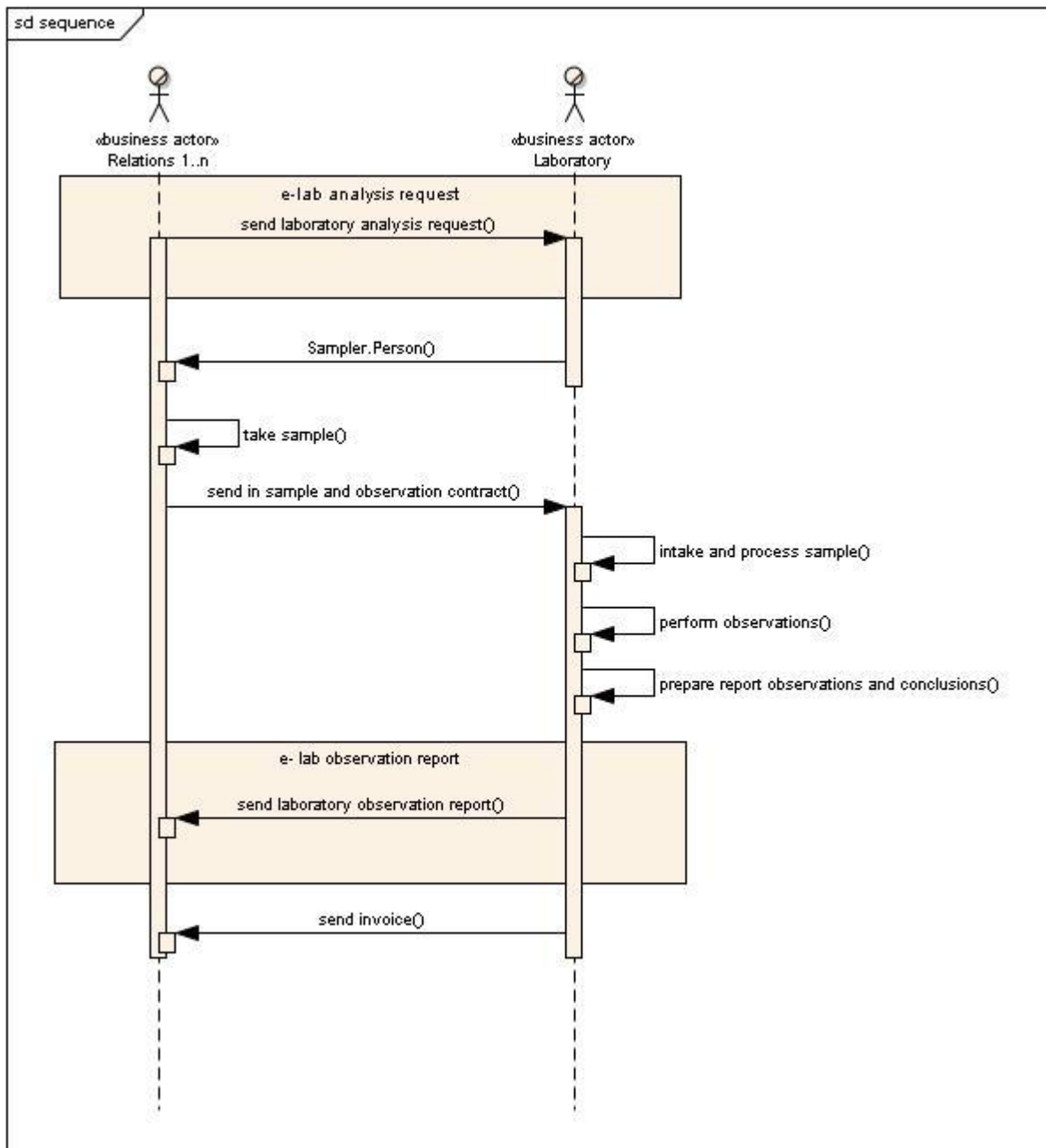


Figure 3 Sequence diagram business collaboration

Note: In the e-Labs information exchange the use of the acknowledge message is optional. The laboratory acknowledgement message contains the LOR Acknowledgement object in the core component library.

5.4 The activity diagrams

The activity diagrams helps identifying all the significant information flows between the laboratory and their partner(s). The laboratory acknowledge message is based on the LOR Acknowledge ABIE in the CCL.

Activity Diagram sending the laboratory analysis request

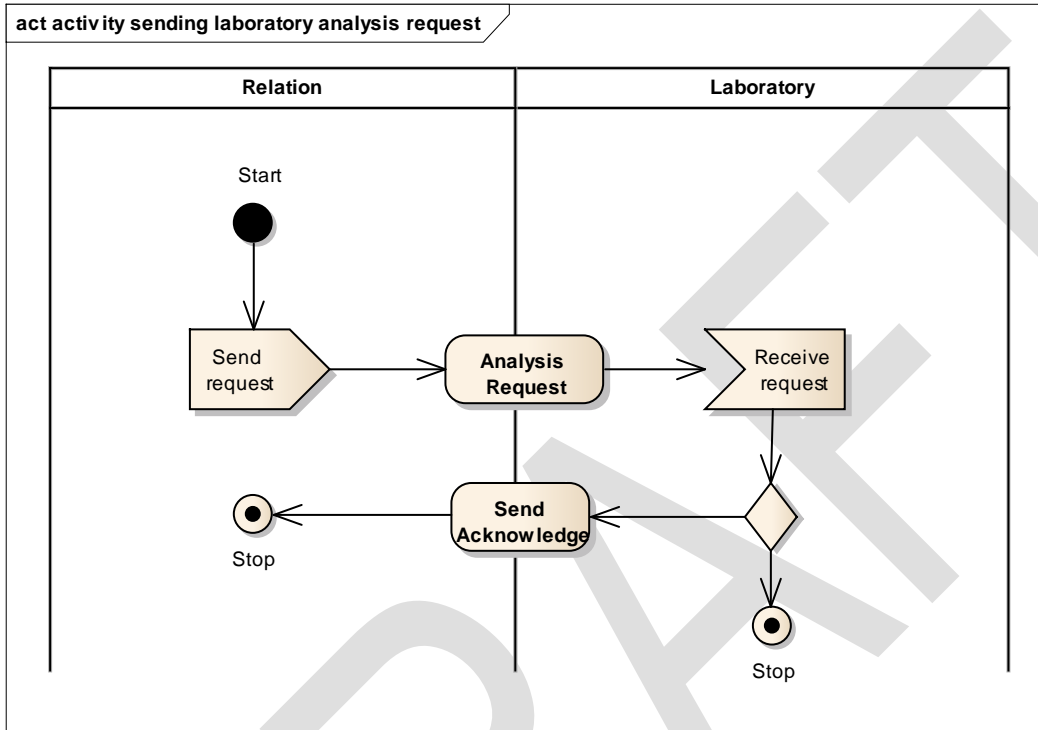


Figure 4 Activity diagram sending the laboratory analysis request

Activity Diagram sending the laboratory observation report

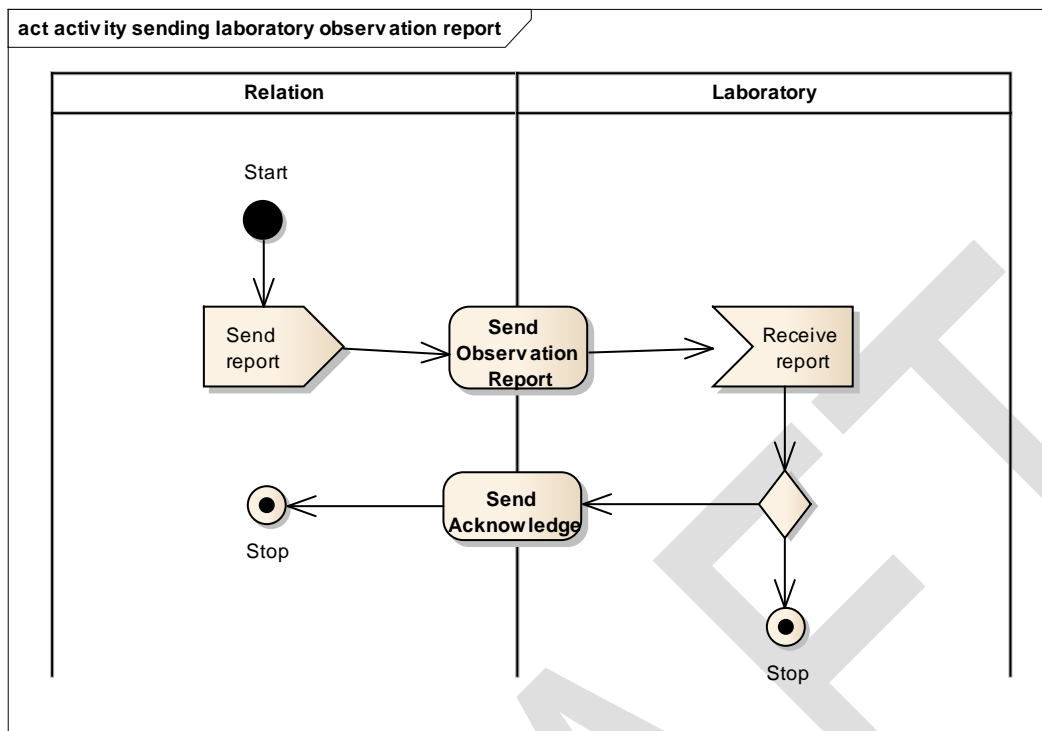


Figure 5 Activity diagram sending the analysis report

5.5 Information model definition (class diagram)

Class diagram describes all the necessary classes of information for a flow of information exchange for the laboratory analysis request and the laboratory observation report. The dedicated classes for the laboratory acknowledgement message are specified in separate class diagram.

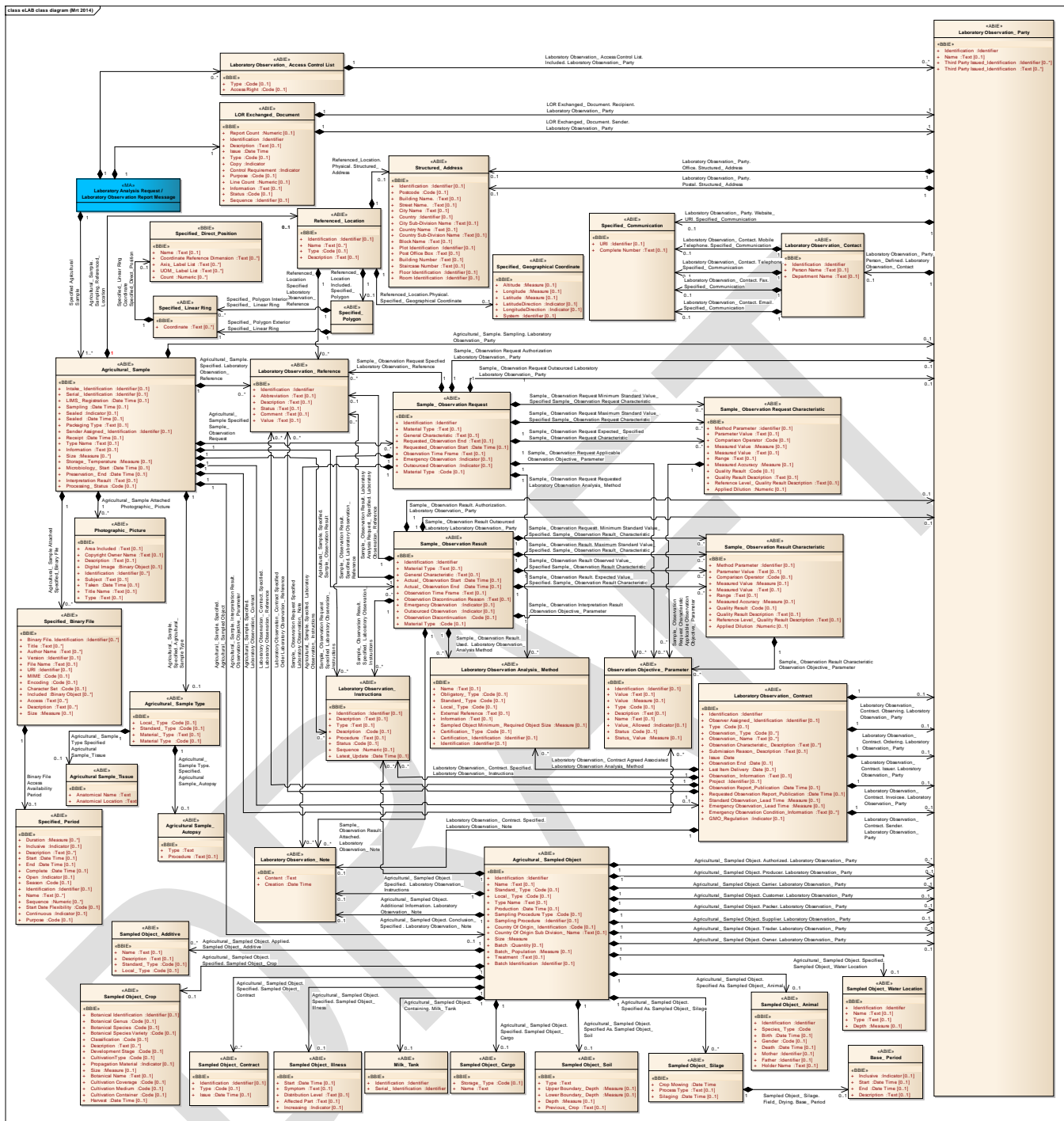


Figure 6 Class diagram for the Laboratory Analysis Request / Laboratory Observation Report message

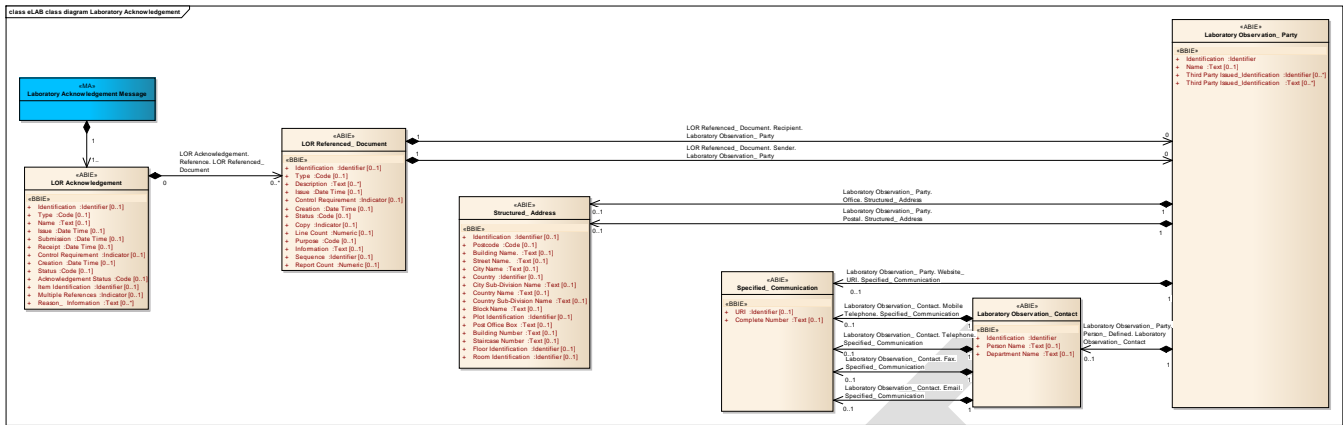


Figure 7 Class diagram for the Laboratory Acknowledgement message

5.6 Business Information Entities

Agricultural Sample_ Autopsy.

Description: Characteristics of a post-mortem examination of an agricultural sample.

Mult.	Business term	Rel.	Type	Description
1	Type	Att	Text	The type, expressed as text, of this agricultural sample autopsy.
0..1	Procedure	Att	Text	The procedure, expressed as text, for this agricultural sample autopsy.

Agricultural Sample_ Tissue.

Description: An aggregate of similar cells and cell products forming a definite kind of structural material with a specific function, in a multicellular organism of an agricultural sample.

Mult.	Business term	Rel.	Type	Description
1	Anatomical Name	Att	Text	The anatomical name, expressed as text, of the organ or part of the organism from which this agricultural sample tissue has been taken.
1	Anatomical Location	Att	Text	The area or part of the body or plant, expressed as text, from which this agricultural sample tissue has been taken.

Agricultural_ Sample Type.

Description: The type of material, such as animal or plant, an agricultural sample contains.

Mult.	Business term	Rel.	Type	Description
0..1	Standard_ Type	Att	Code	The code specifying the standard type of this agricultural sample type.
0..1	Local_ Type	Att	Code	The code specifying the local type of this agricultural sample type.
0..1	Material_ Type	Att	Text	The material type, expressed as text, of this agricultural sample type.
0..1	Material_ Type	Att	Code	The code specifying a material type for this agricultural sample type.

Mult.		Association	Description
Min	MAx		
0	1	Agricultural_ Sample Type. Specified. Agricultural Sample_ Tissue	The tissue specified for this agricultural sample type.
0	1	Agricultural_ Sample Type. Specified. Agricultural Sample_ Autopsy	The autopsy specified for this agricultural sample type.

Agricultural_ Sample.

Description: An agricultural specimen (small part of the whole) taken for testing or analysis.

Mult.	Business term	Rel.	Type	Description
0..1	Intake_ Identification	Att	Identifier	The identifier of the sample, assigned by the observer party during the intake of this agricultural sample.
0..1	Serial_ Identification	Att	Identifier	The serial identifier for this agricultural sample.
0..1	LIMS_ Registration	Att	Date Time	The date, time, date time, or other date time value for the Laboratory Information Management System (LIMS) registration of this agricultural sample.
0..1	Sampling	Att	Date Time	The date, time, date time, or other date time value for the sampling of this agricultural sample.
0..1	Sealed	Att	Indicator	The indication of whether or not this agricultural sampled is sealed.
0..1	Sealed	Att	Date Time	The date, time, date time, or other date time value for the sealing of this agricultural sample.
0..1	Packaging Type	Att	Text	The packaging type, expressed as text, for this agricultural sample.
0..1	Sender Assigned_ Identification	Att	Identifer	The identifier of this agricultural sample, assigned by the sender of the sample.
0..1	Receipt	Att	Date Time	The date, time, date time, or other date time value for the receipt of this agricultural sample.
0..1	Type Name	Att	Text	The name, expressed as text, of this agricultural sample.

Mult.	Business term	Rel.	Type	Description
0..1	Information	Att	Text	Information, expressed as text, about this agricultural sample.
0..*	Size	Att	Measure	A measure of the size of this agricultural sample, such as volume or weight.
0..1	Storage_Temperature	Att	Measure	The measure of the storage temperature for this agricultural sample.
0..1	Microbiology_Start	Att	Date Time	The date, expressed as a date time, when the sample is infected by the laboratory, with a fungous or bacteria organism.
0..1	Preservation_End	Att	Date Time	The date, time, date time, or other date time value for the end of preservation for this agricultural sample.
0..1	Interpretation Result	Att	Text	The interpretation result, expressed as text, for this agricultural sample, indicating whether it complies with the normative values.
0..1	Processing_Status	Att	Code	The code specifying the processing status for this agricultural sample, such as taking sample, processing intake sample, performing observations, preparing report observations and conclusions.

Mult. Min	Max	Association	Description
0	*	Agricultural_Sample. Sampling. Referenced_Location	A referenced location for the sampling of this agricultural sample.
0	1	Agricultural_Sample. Sampling. Laboratory Observation_Party	The laboratory observation party sampling this agricultural sample.
0	unbounded	Agricultural_Sample. Specified. Sample_Observation Result	An observation result specified for this agricultural sample.
0	1	Agricultural_Sample. Specified. Laboratory Observation_Contract	The laboratory observation contract specified for this agricultural sample.
0	1	Agricultural_Sample. Specified. Agricultural_Sampled Object	The sampled object specified for this agricultural sample.
0	1	Agricultural_Sample. Specified. Agricultural_Sample Type	The sample type specified for this agricultural sample.
0	unbounded	Agricultural_Sample. Specified.	A laboratory observation reference specified

Mult.		Association	Description
Min	Max		
		Laboratory Observation_ Reference	for this agricultural sample.
0	unbounded	Agricultural_ Sample. Specified. Laboratory Observation_ Instructions	A set of laboratory observation instructions specified for this agricultural sample.
0	unbounded	Agricultural_ Sample. Specified. Sample_ Observation Request	An observation request specified for this agricultural sample.
0	unbounded	Agricultural_ Sample. Interpretation Result. Observation Objective_ Parameter	An observation objective parameter of the interpretation result for this agricultural sample.
0	unbounded	Agricultural_ Sample. Attached. Photographic_ Picture	An attached photographic picture of this agricultural sample..
0	unbounded	Agricultural_ Sample. Attached.Specified_ Binary File	An attached specified binary file of this agricultural sample.

Agricultural_ Sampled Object.

Description: The physical agricultural object from which a sample has been taken.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this sampled agricultural object.
0..1	Name	Att	Text	The name, expressed as text, to identify this sampled agricultural object.
0..1	Standard_ Type	Att	Code	The type, expressed as code, for this sampled agricultural object.
0..1	Local_ Type	Att	Code	The local code specifying the type of sampled agricultural object, used by the observer party or the customer.
0..1	Type Name	Att	Text	The name, expressed as text, for the type of this sampled agricultural object.
0..1	Production	Att	Date Time	The date, time, date time, or other date time value when this sampled agricultural object was produced.
0..1	Sampling Procedure Type	Att	Code	The code specifying the type of sampling procedure used for this sampled agricultural object.
0..1	Sampling Procedure	Att	Identifier	The identifier of the sampling procedure used for this sampled agricultural object.
0..1	Country Of Origin_ Identification	Att	Code	The identifier for the country of origin for this sampled agricultural object.
0..1	Country Of Origin Sub	Att	Text	The name, expressed as text, for the country

Mult.	Business term	Rel.	Type	Description
	Division_ Name			of origin subdivision for this sampled agricultural object.
1	Size	Att	Measure	The measure of size of this sampled agricultural object.
0..1	Batch	Att	Quantity	The batch quantity for this sampled agricultural object.
0..1	Batch_ Population	Att	Measure	The measure of the population size of this sampled agricultural object.
0..1	Treatment	Att	Text	The treatment, expressed as text, for this sampled agricultural object, such as disinfection.
0..1	Batch Identification	Att	Identifier	The identifier of this sampled agricultural object batch.

Mult. Min MAx		Association	Description
0	1	Agricultural_ Sampled Object. Conclusion_ Specified. Laboratory Observation_ Note	The note, containing additional laboratory observations and or conclusions, specified for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Additional Information_ Specified. Laboratory Observation_ Note	The note, containing additional information, specified for this sampled agricultural object.
0	unbounded	Agricultural_ Sampled Object. Authorized. Laboratory Observation_ Party	A party authorized to do something concerning this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Producer. Laboratory Observation_ Party	The party that produced this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Carrier. Laboratory Observation_ Party	The carrier party for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Customer. Laboratory Observation_ Party	The customer party for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Packer. Laboratory Observation_ Party	The party who packed this sampled agricultural object.

Mult.		Association	Description
Min	MAx		
0	1	Agricultural_ Sampled Object. Supplier. Laboratory Observation_Party	The supplier party for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Owner. Laboratory Observation_Party	The owner party for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Trader. Laboratory Observation_Party	The trader party for this sampled agricultural object.
0	unbounded	Agricultural_ Sampled Object. Applied. Sampled Object_Additive	An additive applied to this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Specified. Sampled Object_Crop	The crop specified for this sampled agricultural object.
0	unbounded	Agricultural_ Sampled Object. Specified. Sampled Object_Contract	A contract specified for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Specified. Sampled Object_Illness	The illness or disease specified for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Containing. Milk_Tank	The milk tank containing this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Specified. Sampled Object_Cargo	Cargo details specified for this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Specified As. Sampled Object_Soil	Soil specified as this sampled agricultural object.
0	unbounded	Agricultural_ Sampled Object. Specified As. Sampled Object_Silage	Silage specified as this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Specified As. Sampled Object_Animal	The animal specified as this sampled agricultural object.
0	1	Agricultural_ Sampled Object. Specified. Sampled Object_Water Location	The water location specified for this sampled agricultural object.
0	unbounded	Agricultural_ Sampled Object. Specified. Laboratory Observation_Instructions	A set of laboratory observation instructions specified for this agricultural sampled object.

Base_Period.

Description: A specific period of time consisting of a start and an end date and time that is used to measure future performance periods.

Mult.	Business term	Rel.	Type	Description
0..1	Inclusive	Att	Indicator	The indication of whether or not the start and end dates are included in this base period.
0..1	Start	Att	Date Time	The date, time, date time or other date time value for the start of this base period of time.
0..1	End	Att	Date Time	The date, time, date time or other date time value for the end of this base period of time.
0..1	Description	Att	Text	The textual description of this base period.

Sampled Object_ Illness

Description: A collection of data about an illness or disease of a sampled object, such as an animal or crop.

Mult.	Business term	Rel.	Type	Description
0..1	Start	Att	Date Time	The day the sampled object illness started.
0..1	Symptom	Att	Text	The symptom or symptoms, expressed as text, of this sampled object illness.
0..1	Distribution Level	Att	Text	The level of illness distribution on an organism, expressed as text, for this sampled object illness.
0..1	Affected Part	Att	Text	The part or parts of an organism affected by this sampled object illness, expressed as text, such as whole animal or crop, or only lower parts.
0..1	Increasing	Att	Indicator	The indication of whether or not this sampled object illness is increasing.

Laboratory Observation_ Access Control List:

Description: A list of permissions attached to a laboratory observation report defining access rights, such as to a party or system.

Mult.	Business term	Rel.	Type	Description
0..1	Type	Att	Code	The code specifying the type of laboratory observation access control list.
0..1	Access Right	Att	Code	The code specifying the access rights for this laboratory observation access control list.

Mult.		Association	Description
Min	MAx		
0	Unbounded	Laboratory Observation_ Access Control List. Included. Laboratory Observation_ Party	A party included in this laboratory observation access control list.

Laboratory Observation Analysis_ Method.

Description: A defined way of performing laboratory observation analysis.

Mult.	Business term	Rel.	Type	Description
0..1	Name.	Att	Code	A defined way of performing laboratory observation analysis.
0..1	Obligatory_ Type	Att	Code	The code specifying the type of analysis method obligatory for the laboratory observation.
0..1	Standard_ Type	Att	Code	The code specifying the type of laboratory observation analysis method, which is the standard method of the observer party for the kind of observation, such as a Logical Observation Identifiers Names and Codes (LOINC) code and method.
0..1	Local_ Type	Att	Code	The code specifying the type of laboratory observation analysis method, which is the local method of the observer party for the kind of observation.
0..1	External Reference	Att	Text	The external reference, expressed as text, for this laboratory observation analysis method.
0..1	Information	Att	Text	Information, expressed as text, for this laboratory observation analysis method.
0..1	Sampled Object Minimum_ Required Object Size	Att	Measure	The measure of the minimum object size required for this laboratory observation analysis method.
0..1	Certification_ Type	Att	Code	The code specifying the type of certification for this laboratory observation analysis method.
0..1	Certification_ Identification	Att	Identifier	The identifier for the certificate granted to a party for this laboraty observation analysis method.
0..1	Identification	Att	Identifier	The identifier for this laboratory observation analysis method.

Laboratory Observation_ Contact.

Description: A person or department that acts as a point of contact for laboratory observations.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier of this laboratory observation contact.
0..1	Person Name	Att	Text	The name, expressed as text, of the person for this laboratory observation contact.
0..1	Department Name	Att	Text	The name, expressed as text, of the department to which this laboratory observation contact belongs.

Mult. Min	Max	Association	Description
0	1	Laboratory Observation_ Contact. Mobile_ Telephone. Specified_ Communication	The mobile phone number of the laboratory observation contact.
0	1	Laboratory Observation_ Contact. Telephone. Specified_ Communication	The telephone number of the laboratory observation contact.
0	1	Laboratory Observation_ Contact. Fax. Specified_ Communication	The fax number of the laboratory observation contact.
0	1	Laboratory Observation_ Contact. Email. Specified_ Communication	The email address of the laboratory observation contact.

Laboratory Observation_ Contract.

Description: The written or spoken contract between two parties for the expressed purpose of specifying the required laboratory observations and conditions.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this observation contract.
0..1	Observer Assigned_ Identification	Att	Identifier	The identifier assigned by the observation party for this laboratory observation contract.
0..1	Type	Att	Code	The type of laboratory observation contract.

Mult.	Business term	Rel.	Type	Description
0..*	Observation_Type	Att	Code	A code expressing the type of observations for this laboratory observation contract.
0..*	Observation_Name	Att	Text	A name, expressed as text, of the observation for this laboratory observation contract.
0..*	Observation Characteristic_ Description	Att	Text	A textual description of the observation characteristics for this laboratory observation contract.
0..1	Submission Reason_ Description	Att	Text	The textual description of the reason for the submission for this laboratory observation contract.
1	Issue	Att	Date Time	The date or date time, expressed as date time, when the observation contract is issued by the directing party, or when the sender sent in the sample with instructions.
0..1	Observation End	Att	Date	The date when the observation results have been finalized for this laboratory observation contract.
0..1	Last Item Delivery	Att	Date	The final date when the customer (directing party) needs to receive observation results for this laboratory observation contract.
0..1	Observation_ Information	Att	Text	Information, expressed as text, explaining the results at the level of sampled objects, which can cover many observation results and many samples for this laboratory observation contract.
0..1	Project	Att	Identifier	The identifier of the project for this laboratory observation contract.
0..1	Observation Report Publication	Att	Date Time	The date or date time, expressed as date time, when the observer party publishes the observation results for this laboratory observation contract.
0..1	Requested Observation Report_ Publication	Att	Date Time	The requested date or date time when the observer party publishes the observation results for this laboratory observation contract.
0..1	Standard Observation_	Att	Measure	The measure of the standard

Mult.	Business term	Rel.	Type	Description
	Lead Time			observation lead time for this laboratory observation contract.
0..1	Emergency Observation_Lead Time. Measure	Att	Measure	The measure of the emergency observation lead time for this laboratory observation contract.
0..1	Emergency Observation Condition_Information	Att	Text	Information, expressed as text, explaining the emergency observation conditions for this laboratory observation contract.
0..1	GMO_Regulation. Indicator	Att	Indicator	The indication of whether or not the Genetically Modified Organism (GMO) regulations apply for this laboratory observation contract.

Mult.		Association	Description
Min	Max		
0	1	Laboratory Observation_Contract. Specified. Laboratory Observation_Note	The note specified for this laboratory observation contract with additional observations and/or conclusions.
0	1	Laboratory Observation_Contract. Ordering. Laboratory Observation_Party	The ordering party for this laboratory observation contract.
0	1	Laboratory Observation_Contract. Observing. Laboratory Observation_Party	The observing party for this laboratory observation contract.
0	1	Laboratory Observation_Contract. Invoicee. Laboratory Observation_Party	The invoicee party for this laboratory observation contract.
0	1	Laboratory Observation_Contract. Contract_Sender. Laboratory Observation_Party	The contract sender party for this laboratory observation contract.
0	1	Laboratory Observation_Contract. Issuer. Laboratory Observation_Party	The issuer party for this laboratory observation contract.
0	unbounded	Laboratory Observation_Contract. Specified. Laboratory Observation_Reference	A reference specified for this laboratory observation contract.
0	unbounded	Laboratory Observation_Contract. Specified. Laboratory Observation_Instructions	A set of laboratory observation instructions specified for this laboratory observation contract.

Mult.		Association	Description
Min	Max		
0	unbounded	Laboratory Observation_ Contract. Order_ Specified. Laboratory Observation_ Reference	An order reference specified for this laboratory observation contract
0	unbounded	Laboratory Observation_ Contract. Agreed_ Associated. Laboratory Observation Analysis_ Method	An agreed analysis method associated with this laboratory observation contract.

Laboratory Observation_ Instructions.

Description: Information of an instructive nature that describes how to conduct this laboratory observation.

Mult.	Business term	Rel.	Type	Description
0..1	Identification	Att	Identifier	The identifier for this set of laboratory observation instructions.
0..1	Description	Att	Text	The textual description of this set of laboratory observation instructions.
0..1	Type	Att	Text	The type, expressed as text, of this set of laboratory observation instructions.
0..1	Description	Att	Code	The code specifying a description of a laboratory observation instruction or a set of instructions.
0..1	Procedure	Att	Text	The procedure, expressed as text, for a set of laboratory observation Instructions.
0..1	Status	Att.	Code	The code specifying the status of this set of laboratory observation instructions.
0..1	Sequence	Att.	Numeric	The sequence number of this set of laboratory observation instructions.
0..1	Latest Update	Att..	Date Time	The date, time, date time, or other date time value of the latest update of this set of laboratory observation instructions.

Laboratory Observation_ Note.

Description: Notes and conclusions related to a laboratory observation.

Mult.	Business term	Rel.	Type	Description
1	Content	Att	Text	The content, expressed as text, of this laboratory observation note.

Mult.	Business term	Rel.	Type	Description
1	Creation	Att	Date Time	The date, time, date time, or other date time value for the creation of this laboratory observation note.

Laboratory Observation_Party.

Description: An individual, group, or body having a role in laboratory observations.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier of this laboratory observation party.
0..1	Name	Att	Text	The name, expressed as text, of this laboratory observation party.
0..*	Third Party Issued_ identification	Att	Identifier	An alternate identifier issued by a third party for this laboratory observation party.
0..*	Third Party Issued_ identification	Att	Text	A third party issued identifier, expressed as text, for this laboratory observation party.

Mult.	Association	Description
Min	max	
0	1 Laboratory Observation_Party. Office. Structured_Address	The office address of this laboratory observation party.
0	1 Laboratory Observation_Party. Postal. Structured_Address	The postal address of this laboratory observation party.
0	1 Laboratory Observation_Party. Website_URI. Specified_Communication	The website Uniform Resource Identifier (URI) of this laboratory observation party.
0	1 Laboratory Observation_Party. Person_Defined. Laboratory Observation_Contact	The person defined as the contact for this laboratory observation party.

Laboratory Observation_Reference.

Description: The direction to related information for this laboratory observation.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this laboratory observation reference.

Mult.	Business term	Rel.	Type	Description
0..1	Abbreviation	Att	Text	The shortened text string to identify this laboratory observation reference.
0..1	Description	Att	Text	The textual description of this laboratory observation reference.
0..1	Status	Att	Text	The status, expressed as text, for this laboratory observation reference.
0..1	Comment	Att	Text	The comment, expressed as text, for this laboratory observation reference.
0..1	Value	Att	Text	The value, expressed as text, for this laboratory observation reference.

LOR Acknowledgement_ Document

Description: A collection of data for a piece of written, printed or electronic matter that provides information or evidence in a Laboratory Observation Report (LOR) acknowledgement document.

Mult.	Business term	Rel.	Type	Description
0..1	Identification	Att.	Identifier	The identifier of this LOR acknowledgement document.
0..1	Type	Att.	Code	The code specifying a type of LOR acknowledgement document [Reference United Nations Code List (UNCL) 1001].
0..1	Name	Att.	Text	The name, expressed as text, for this LOR acknowledgement document.
0..1	Issue. Date Time	Att.	Date Time	The date, time, date time or other date time value for the issuance of this LOR acknowledgement document.
0..1	Report Submission	Att.	Date Time	The date, time, date time or other date time value for the submission of this LOR acknowledgement document to a receiver by a sender.
0..1	Report Receipt	Att.	Date Time	The date, time, date time or other date time value for the receipt of this LOR acknowledgement document.
0..1	Control Requirement	Att.	Indicator	The indication of whether or not this LOR acknowledgement document has a control requirement.

Mult.	Business term	Rel.	Type	Description
0..1	Creation	Att.	Date Time	The date, time, date time or other date time value of a creation of this LOR acknowledgement document.
0..1	Status	Att.	Code	The code specifying a status of this LOR acknowledgement document.
0..1	Acknowledgement Status	Att.	Code	The code specifying an acknowledgment status for this LOR acknowledgement document.
0..1	Item Identification	Att.	Identifier	The identifier of a specific item in this LOR acknowledgement document.
0..1	Multiple References	Att.	Indicator	The indication of whether or not this LOR acknowledgement document references multiple other documents.
0..*	Reason Information	Att.	Text	Reason information, expressed as text, for this LOR acknowledgement document.

Mult.	Association	Description
Min	Max	
0	*	LOR Acknowledgement_ Document. Reference. LOR Referenced_ Document Other documents referenced by this LOR acknowledgement document.

LOR Exchanged_ Document

Description: A collection of data for a piece of written, printed or electronic matter that is exchanged between two or more parties in a laboratory observation report (LOR) document exchange.

Mult.	Business term	Rel.	Type	Description
0..1	Report Count	Att	Numeric	The count of the number of reports in this LOR exchanged document.
1	Identification	Att	Identifier	The unique identifier of this LOR exchanged document.
0..1	Description	Att	Text	A textual description of this LOR exchanged document.
1	Issue	Att	Date Time	The date, time, date time or other date time value for the issuance of this LOR

Mult.	Business term	Rel.	Type	Description
				exchanged document.
0..1	Type	Att	Code	The code specifying the type of LOR exchanged document.
1	Copy	Att	Indicator	The indication of whether or not this LOR exchanged document is a copy.
1	Control Requirement	Att	Indicator	The indication of whether or not this LOR exchanged document has specific control requirements.
0..1	Purpose	Att	Code	A code specifying a purpose of an amendment to this LOR exchanged document.
0..1	Line Count	Att	Numeric	The number of line items in this LOR exchanged document.
0..1	Information	Att	Text	Information, expressed as text, for this LOR exchanged document.
0..1	Status	Att	Code	The code specifying the status of this LOR exchanged document.
0..1	Sequence	Att	Numeric	The identifier for this sequence of this LOR exchanged document.

Mult.		Association	Description
Min	Max		
1	1	LOR Exchanged_ Document. Sender. Laboratory Observation_ Party	The party sending this LOR exchanged document.
1	1	LOR Exchanged_ Document. Recipient. Laboratory Observation_ Party	The party receiving this LOR exchanged document.

LOR Referenced_ Document.

Description written, printed or electronic matter that is referenced for Laboratory Observation Report (LOR) purposes.

Mult.	Business term	Rel.	Type	Description
0..1	Identification	Att	Identifier	The identifier for this LOR referenced document.

Mult.	Business term	Rel.	Type	Description
0..1	Type	Att	Code	The code specifying a type of LOR referenced document [Reference United Nations Code List (UNCL) 1001].
0..*	Description	Att	Text	A textual description of this LOR referenced document.
0..1	Issue	Att	Date Time	The date, time, date time or other date time value for the issuance of this LOR referenced document.
0..1	Control Requirement	Att	Indicator	The indication of whether or not a LOR referenced document has specific control requirements.
0..1	Creation	Att	Date Time	The date, time, date time or other date time value of a creation of this LOR referenced document.
0..1	Status	Att	Code	The code specifying a status of this LOR referenced document.
0..1	Copy	Att	Indicator	The indication of whether or not the LOR referenced document is a copy.
0..1	Line Count	Att	Numeric	The count of the number of lines in this LOR referenced document.
0..1	Purpose	Att	Code	The code specifying the purpose of this LOR referenced document, such as request or reminder.
0..1	Information	Att	Text	Information, expressed as text, for this LOR referenced document.
0..*	Sequence	Att	Identifier	The identifier for the sequence of this LOR referenced document.
0..1	Report Count	Att	Numeric	The number of reports within this LOR referenced document.

Mult.		Association	Description
Min	MAx		
0	1	LOR Referenced_ Document. Sender. Laboratory Observation_ Party	The party that sends this LOR referenced document.

Mult.		Association	Description
Min	MAx		
0	1	LOR Referenced_ Document. Recipient. Laboratory Observation_ Party	The party that receives this LOR referenced document.

Milk_Tank.

Description: A bulk storage on a farm for collecting and storage of fresh raw milk.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this milk tank.
1	Serial_ Identification	Att	Identifier	The serial number assigned to this milk tank.

Observation Objective_ Parameter.

Description: A feature that is fixed for the case in question but may be different in other cases for this observation objective.

Mult.	Business term	Rel.	Type	Description
0..1	Identification.	Att.	Identifier	The identifier for this observation objective parameter.
0..1	Value	Att.	Text	The value, expressed as text, of this observation objective parameter.
0..1	Value	Att.	Measure	The measure of the value for this observation objective parameter.
0..1	Type	Att.	Code	The code specifying the type of observation objective parameter, such as retailer, country, toxic standard or examination type.
0..1	Description	Att.	Text	The textual description of this observation objective parameter.
0..1	Name	Att.	Text	The name, expressed as text, for this observation objective parameter.
0..1	Value Allowed	Att.	Indicator	The indication of whether or not this value is allowed for this parameter observation objective.
0..1	Status	Att.	Code	The code specifying the status of this observation objective parameter.

Mult.	Business term	Rel.	Type	Description
0..1	Status Value	Att.	Measure	The measure of the status value for this observation objective parameter.

Photographic_Picture

Description: A photograph or video still represented as a digital image for electronic sharing.

Mult.	Business term	Rel.	Type	Description
0..1	Area Included	Att	Text	The area or location, expressed as text, that is included in this photographic picture.
0..1	Copyright Owner Name	Att	Text	The name of the copyright owner, expressed as text, for this photographic picture.
0..1	Description	Att	Text	The textual description of this photographic picture.
0..1	Digital Image	Att	Binary object	Binary object data that is the actual digital image for this photographic picture.
0..*	Identification	Att	Identifier	An identifier for this photographic picture.
0..1	Subject	Att	Text	The subject, expressed as text, of this photographic picture.
0..1	Taken	Att	Date Time	The date, time, date time, or other date value of when this photographic picture was created.
0..1	Title Name	Att	Text	The name, expressed as text, of the title for this photographic picture.
0..1	Type	Att	Text	The type, expressed as text, of this photographic picture.

Referenced Location

Description: A reference to a physical location or place.

Mult.	Business term	Rel.	Type	Description
0..1	Identification	Att.	Identifier	The unique identifier for this referenced location.
0..*	Name	Att.	Text	A name, expressed as text, of this referenced location.
0..1	Type	Att	Code	The code specifying the type of referenced

Mult.	Business term	Rel.	Type	Description
				location.
0..1	Description	Att.	Text	The textual description for this referenced location..

Mult.	Association	Description
Min	MAx	
0	1 Referenced_ Location. Physical. Specified_ Geographical Coordinate	Geographical coordinate information for this referenced location.
0	1 Referenced_ Location. Physical. Structured_ Address	The physical address of this referenced location.
0	1 Referenced_ Location. Included. Specified_ Polygon	The polygon included for this referenced location.
0	unbounded Referenced_ Location. Specified. Laboratory Observation_ Reference	A laboratory observation reference specified for this referenced location.

Sampled Object_ Additive.

Description: A product with the purpose to be added to another product in order to maintain or to change the quality of that product.

Mult.	Business term	Rel.	Type	Description
0..1	Name	Att	Text	The name, expressed as text, for this sampled object additive.
0..1	Description	Att	Text	The textual description of this sampled object additive, such as a name identifying the type and characteristics of the product.
0..1	Standard_ Type	Att	Code	The code specifying the standard type for this sampled object additive.
0..1	Local_ Type	Att	Code	The code specifying the local type for this sampled object additive.

Sampled Object_ Animal

Description: A creature kept or raised on a farm or ranch, kept in a aquaculture facility, or living or found in the natural environment, such as a livestock animal, a pet, or a wild animal, which is sampled.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this sampled object animal, such as the number appearing on its ear tag.
1	Species_ Type	Att	Code	The code specifying the type of species of this sampled object animal, such as bovine, sheep, goat, chicken, dog, cat, rat, salmon, catfish, whale.
0..1	Birth	Att	Date Time	The date of birth for this sampled object animal.
0..1	Gender	Att	Code	The code specifying the gender of this sampled object animal.
0..1	Death	Att	Date Time	The date of death for this sampled object animal.
0..1	Mother	Att	Identifier	The identifier of the mother of this sampled object animal.
0..1	Father	Att	Identifier	The identifier of the father of this sampled object animal.
0..1	Holder Name	Att	Text	The name, expressed as text, of the holder of this sampled object animal.

Sampled Object_ Cargo.

Description: Goods being transported, which are sampled.

Mult.	Business term	Rel.	Type	Description
0..1	Storage_ Type	Att	Code	The code specifying the type of package and storage in the transport unit for this sampled object cargo.
1	Name	Att	Text	The name, expressed as text, for this sampled object cargo.

Sampled Object_ Contract

Description: An agreement between two or more parties related to a sampled object.

Mult.	Business term	Rel.	Type	Description
0..1	Identification	Att	Identifier	The unique identifier of this sampled object contract.

Mult.	Business term	Rel.	Type	Description
0..1	Type	Att	Code	The code specifying the type of sampled object contract.
0..1	Issue	Att	Date Time	The date, date time, or other date time value for the issuance of this sampled object contract.

Sampled Object_Crop

Description: A botanical item such as a plant, flower or bulb, which is sampled.

Mult.	Business term	Rel.	Type	Description
0..1	Botanical Identification	Att	Identifier	The unique botanical identification for this sampled object crop.
0..1	Botanical Genus	Att	Code	The code specifying a botanical genus for this sampled object crop.
0..1	Botanical Species	Att	Code	The code specifying a botanical species for this sampled object crop.
0..1	Botanical Species Variety	Att	Code	The code specifying a botanical species variety for this sampled object crop.
0..1	Classification	Att	Code	The code specifying a classification for this this sampled object crop.
0..*	Description	Att	Text	A textual description for this sampled object crop.
0..1	Development Stage	Att	Code	The code specifying a development stage for this sampled object crop.
0..1	Cultivation Type	Att	Code	The code specifying the type of cultivation of this sampled object crop.
0..1	Propagation Material	Att	Indicator	The indication of whether or not this sampled object crop is propagation material.
0..1	Size	Att	Measure	The measure of the size of this sampled object crop.
0..1	Botanical Name	Att	Text	The botanical name, expressed as text, for this sampled object crop.
0..1	Cultivation Coverage	Att	Code	The code specifying a type of cultivation coverage, such as glass, for this sampled object crop.

Mult.	Business term	Rel.	Type	Description
0..1	Cultivation Medium	Att	Code	The code specifying a type of cultivation medium, such as substrate,, for this sampled object crop.
0..1	Cultivation Container	Att	Code	The code specifying a type of cultivation container, such as a pot or an iron cabinet, for this sampled object crop.
0..1	Harvest	Att	Date Time	The date, time, date time, or other date time value on which this sampled object crop has been harvested.

Sampled Object_ Silage.

Description: Fermented, high-moisture feed, which is sampled.

Mult.	Business term	Rel.	Type	Description
1	Crop Mowing	Att	Date Time	The date, expressed as date time, indicating the day that the crop is mowed for this sampled object silage.
0..1	Process Type	Att	Text	The name or code, expressed as text, to indicate the type of silage process and storage for this sampled object silage.
0..1	Silaging	Att	Date Time	The date, expressed as date time, indicating the day the crop is stored in the silo or packed and sealed in packs for this sampled object silage.

Mult.		Association	Description
0	1	Sampled Object_ Silage. Field_ Drying. Base_ Period	The field drying period for this sampled object silage.

Sampled Object_ Soil

Description: A natural body consisting of layers (soil horizons) of a mix of mineral and organic constituents of variable thicknesses, generally the natural upper layer of the earth surface, which is sampled.

Mult.	Business term	Rel.	Type	Description
1	Type	Att	Text	The type, expressed as text, for this sample object soil.

Mult.	Business term	Rel.	Type	Description
0..1	Upper Boundary_ Depth	Att	Measure	The measure of the upper depth boundary of the zone from which this sampled object soil is taken, measured from the earth's surface.
0..1	Lower Boundary_ Depth	Att	Measure	The measure of the lower depth boundary of the zone from which this sampled object soil is taken, measured from the earth's surface.
0..1	Depth	Att	Measure	The measure of the depth at which this sampled object soil is taken, measured from the earth's surface.
0..1	Previous_ Crop	Att	Text	The crop, expressed as text, that was cultivated on this soil in the previous year or years.

Sampled Object_ Water Location.

Description: A location at which water is sampled, such as a groundwater location or a surface water location.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier of this sampled object water location.
0..1	Name	Att	Text	The name, expressed as text, of this sampled object water location.
0..1	Type	Att	Text	The type, expressed as text, of this sampled object water location, such as surface water or groundwater.
0..1	Depth	Att	Measure	The measure of the depth of this sampled object water location, indicating in the case of surface water at which water depth the sample is taken, and in the case of groundwater, at what depth below surface the filter in the borehole is.

Sample_ Observation Request.

Description: A collection of diagnostic data, visual or technical, and processing data, to be performed on a sample.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this sample observation request.

Mult.	Business term	Rel.	Type	Description
0..1	Material Type	Att	Text	The material type of the to be observed sample, expressed as text, such as animal or blood.
0..1	General Characteristic	Att	Text	The general characteristic, expressed as text, for this sample observation request, such as length, volume, density, titre, sensitivity, conductivity.
0..1	Requested_ Observation Start	Att	Date Time	The date, time, date time, or other date time value for the start of the observation for this sample observation request.
0..1	Requested_ Observation End	Att	Date Time	The date, time, date time, or other date time value for the end of the observation for this sample observation request.
0..1	Observation Time Frame	Att	Text	The observation time frame, expressed as text, for this sample observation request.
0..1	Emergency Observation	Att	Indicator	The indication of whether or not the observation was an emergency observation for this sample observation request.
0..1	Outsourced Observation	Att	Indicator	The indication of whether or not the observation will be an outsourced observation (performed by a third party).
0..1	Material Type	Att	Code	The code specifying a material type for this sample observation request.

Mult. Min	MAx	Association	Description
0	unbounded	Sample_ Observation Request. Specified. Laboratory Observation_ Reference	A laboratory observation reference specified for this sample observation request.
0	1	Sample_ Observation Request. Authorization. Laboratory Observation_ Party	The laboratory observation party who authorized this sample observation request.
0	unbounded	Sample_ Observation Request. Attached. Laboratory Observation_ Note	A note attached to the laboratory observation request with additional observations and or conclusions.
1	unbounded	Sample_ Observation Request. Requested. Laboratory Observation Analysis_ Method	A laboratory observation analysis method used for this sample observation request.

Mult.		Association	Description
Min	MAx		
0	unbounded	Sample_ Observation Request. Minimum Standard Value_ Specified. Sample_ Observation Request Characteristic	A minimum standard value of the values for the characteristic to be observed or to be measured by using the specified type of observation for this sample observation request.
0	unbounded	Sample_ Observation Request. Maximum Standard Value_ Specified. Sample_ Observation Request Characteristic	A maximum standard value of the values for the characteristic to be observed or to be measured by using the specified type of observation for this sample observation request.
0	unbounded	Sample_ Observation Request. Expected_ Specified. Sample_ Observation Request Characteristic	An expected value for the characteristic, to be observed or to be measured according to the specified type of observation, for this sample observation request.
0	unbounded	Sample_ Observation Request. Specified. Laboratory Observation_ Instructions	A set of laboratory observation instructions specified for this sample observation request.
0	1	Sample_ Observation Request. Outsourced Laboratory. Laboratory Observation_ Party	The outsourced laboratory party who will perform this sample observation request.
0	unbounded	Sample_ Observation Request. Specified_ Applicable. Observation Objective_ Parameter	An observation objective parameter applicable to this sample observation request.

Sample_ Observation Request Characteristic.

Description: The type of observation characteristics to be performed on a sample.

Mult.	Business term	Rel.	Type	Description
0..1	Method Parameter	Att	Identifier	The identifier of the method parameter for this sample observation request characteristic.
0..1	Parameter Value	Att	Text	The parameter value, expressed as text, for this sample observation request characteristic.
0..1	Comparison Operator	Att	Code	The code specifying the operator, such as less than, greater than or equal to, for comparing the measured value for this sample observation request characteristic.
0..1	Measured Value	Att	Measure	The measured value, expressed as a measure, for this sample observation

Mult.	Business term	Rel.	Type	Description
				request characteristic.
0..1	Measured Value	Att	Text	The measured value, expressed as text, for this sample observation request characteristic.
0..1	Range	Att	Text	The range, expressed as text, of the values of the measurements performed for this sample observation request characteristic.
0..1	Measured Accuracy	Att	Measure	Accuracy, expressed as a measure, of the measurement for this sample observation request characteristic.
0..1	Quality Result	Att	Code	The code specifying the quality of the result for this sample observation request characteristic.
0..1	Quality Result Description	Att	Text	The textual description of the quality of the result for this sample observation request characteristic.
0..1	Reference Level_ Quality Result Description	Att	Text	The textual description of the reference level for the quality of the result for this sample observation request characteristic.
0..1	Applied Dilution	Att	Numeric	The rate of the requested dilution for this sample observation request characteristic.

Mult.	Association	Description
Min	MAx	
0	unbounded	Sample_ Observation Request Characteristic. Applicable Objective. Observation Objective_ Parameter
		An applicable objective parameter of the interpretation result for this observation request characteristic.

Sample_ Observation Result.

Description: A collection of diagnostic data, visual or technical, and processing data, performed on a sample.

Mult.	Business term	Rel.	Type	Description
1	Identification	Att	Identifier	The identifier for this sample observation result.
0..1	Material Type	Att	Text	The context material of the observed sample, expressed as text, such as animal

Mult.	Business term	Rel.	Type	Description
				or blood.
0..1	General Characteristic	Att	Text	The general characteristic, expressed as text, for this sample observation result, such as length, volume, density, titre, sensitivity, conductivity.
0..1	Actual_ Observation Start	Att	Date Time	The date, time, date time, or other date time value for the start of the observation for this sample observation result.
0..1	Actual_ Observation End	Att	Date Time	The date, time, date time, or other date time value for the end of the observation for this sample observation result.
0..1	Observation Time Frame	Att	Text	The observation time frame, expressed as text, for this sample observation result.
0..1	Observation Discontinuation Reason	Att	Text	The observation discontinuation reason, expressed as text, for this sample observation result.
0..1	Emergency Observation	Att	Indicator	The indication of whether or not the observation was an emergency observation for this sample observation result.
0..1	Outsourced Observation	Att	Indicator	The indication of whether or not the observation was an outsourced observation (performed by a third party).
0..1	Observation Discontinuation Reason	Att	Code	The code specifying the observation discontinuation reason for this sample observation result.
0..1	Material Type	Att	Code	The code specifying a material type for this sample observation request.

Mult.		Association	Description
Min	Max		
0	unbounded	Sample_ Observation Result. Specified. Laboratory Observation_ Reference	A laboratory observation reference specified for this sample observation result.
0	1	Sample_ Observation Result. Authorization. Laboratory Observation_ Party	The laboratory observation party who authorized this sample observation result.
0	unbounded	Sample_ Observation Result. Attached. Laboratory Observation_	A note attached to the laboratory observation results with additional

Mult.		Association	Description
Min	Max		
		Note	observations and or conclusions.
0	unbounded	Sample_ Observation Result. Used. Laboratory Observation Analysis_ Method	The laboratory observation analysis method used for this sample observation result.
0	unbounded	Sample_ Observation Result. Minimum Standard Value_ Specified. Sample_ Observation Result Characteristic	A minimum standard value of the values for the characteristic observed or measured by using the specified type of observation for this sample observation result.
0	unbounded	Sample_ Observation Result. Maximum Standard Value_ Specified. Sample_ Observation Result Characteristic	A maximum standard value of the values for the characteristic observed or measured by using the specified type of observation for this sample observation result.
0	unbounded	Sample_ Observation Result. Observed Value_ Specified. Sample_ Observation Result Characteristic	An observed value for the characteristic, acquired by observing or measuring according to the specified type of observation for this sample observation result.
0	unbounded	Sample_ Observation Result. Expected Value_ Specified. Sample_ Observation Result Characteristic	An expected value for the characteristic, to be observed or measured according to the specified type of observation for this sample observation result.
0	unbounded	Sample_ Observation Result. Specified. Laboratory Observation_ Instructions	A set of laboratory observation instructions specified for this sample observation result.
0	1	Sample_ Observation Result. Laboratory Analysis Request_ Specified. Laboratory Observation_ Reference	The laboratory observation analysis request reference specified for this sample observation result.
0	1	Sample_ Observation Result. Outsourced Laboratory. Laboratory Observation_ Party	The outsourced laboratory party who performed this sample observation result.
0	unbounded	Sample_ Observation Result. Interpretation Result_ Applicable. Observation Objective_ Parameter	An applicable observation objective parameter of the interpretation result for this sample observation result.

Sample_ Observation Result Characteristic.

Description: Specifies the type of the performed observation and the acquired values of this observation on the sample.

Mult.	Business term	Rel.	Type	Description
0..1	Method Parameter	Att	Identifier	The identifier of the method parameter for this sample observation result characteristic.
0..1	Parameter Value	Att	Text	The parameter value, expressed as text, for this sample observation result characteristic.
0..1	Comparison Operator	Att	Code	The code specifying the operator, such as less than, greater than or equal to, for comparing the measured value for this sample observation result characteristic.
0..1	Measured Value	Att	Measure	The measured value, expressed as a measure, for this sample observation result characteristic.
0..1	Measured Value	Att	Text	The measured value, expressed as text, for this sample observation result characteristic.
0..1	Range	Att	Text	The range, expressed as text, of the values of the measurements performed for this observation result characteristic sample.
0..1	Measured Accuracy	Att	Measure	Accuracy, expressed as a measure, of the measurement for this sample observation result characteristic.
0..1	Quality Result	Att	Code	The code specifying the quality of the result for this sample observation result characteristic.
0..1	Quality Result Description	Att	Text	The actual value of the observation on the sample , expressed as a text.
0..1	Reference Level_ Quality Result Description	Att	Text	The textual description of the reference level for the quality of the result for this sample observation result characteristic.
0..1	Applied Dilution	Att	Numeric	The rate of the applied dilution for this sample observation result characteristic.

Mult.	Association	Description
Min	MAx	
0	unbounded	Sample_ Observation Result Characteristic. Interpretation Result_ Applicable. Observation Objective_ Parameter
		An applicable observation objective parameter of the interpretation result for this sample observation result characteristic.

Specified_ Communication

Description: An exchange of information between persons and/or organizations.

Mult.	Business term	Rel.	Type	Description
0..1	URI	Att	Identifier	The Uniform Resource Identifier (URI), such as a web or an email address, for this specified communication.
0..1	Complete Number	Att	Text	The text string of characters that make up the complete number for this specified communication.

Specified_ Direct Position

Description: A specified physical location described within a coordinate reference system.

Mult.	Business term	Rel.	Type	Description
0..1	Name	Att.	Text	A specified physical location described within a coordinate reference system.
0..*	Coordinate Reference Dimension	Att.	Text	A coordinate reference dimension, expressed as text, for this specified direct position.
0..*	Axis_ Label List	Att	Text	An ordered list of axis labels, expressed as text, for this specified direct position.
0..*	UOM_ Label List	Att.	Text	An ordered list of Unit Of Measure (UOM) labels, expressed as text, for this specified direct position.
0..*	Count	Att	Numeric	A count for this specified direct position.

Specified_ Geographical Coordinate.

Description: The latitude, longitude and altitude of a place, by which its relative situation on the globe is known.

Mult.	Business term	Rel.	Type	Description
0..1	Altitude	Att	measure	The measure of the altitude that reflects the vertical elevation of an object above a surface for this specified geographical coordinate.
0..1	Longitude	Att	measure	The measure of the longitude as an angular distance east or west from the Greenwich meridian to the meridian of a specific place for this specified geographical coordinate.

Mult.	Business term	Rel.	Type	Description
0..1	Latitude	Att	measure	The measure of the latitude as an angular distance north or south from the Equator meridian to the meridian of a specific place for this specified geographical coordinate.
0..1	System	Att	identifier	The identifier of the system used for measuring this specified geographical coordinate.

Specified_ Binary File

Description: A specified computer file or program stored in a binary format.

Mult.	Business term	Rel.	Type	Description
0..*	Identification	Att	Identifier	A unique identifier for this specified binary file.
0..*	Title	Att	Text	A title, expressed as text, for this specified binary file.
0..*	Author Name	Att	Text	An author name, expressed as text, of this specified binary file..
0..1	Version	Att	Identifier	The unique version identifier for this specified binary file.
0..1	File Name	Att	Text	The file name, expressed as text, of this specified binary file.
0..1	URI	Att	Identifier	The unique Uniform Resource Identifier (URI) for this specified binary file.
0..1	Mime	Att	Code	The code specifying the Multipurpose Internet Mail Extensions (MIME) type for this specified binary file.
0..1	Encoding	Att	Code	The code specifying the encoding of this specified binary file.
0..1	Character Set	Att	Code	The code specifying the character set for this specified binary file.
0..*	Included	Att	Binary Object	An included binary object for this specified binary file.
0..*	Access	Att	Text	Access information, expressed as text, for this specified binary file such as security and download parameters

Mult.	Business term	Rel.	Type	Description
0..*	Description	Att	Text	A textual description of this specified binary file.
0..1	Size	Att	Measure	The measure of the size of this specified binary file.

Mult.	Association	Description
Min	Max	
0	1	Specified_ Binary File. Access Availability. Specified_ Period The specified period when access to this binary file is available.

Specified_ Linear Ring

Description: A specified array of points which define a closed loop which is not self intersecting.

Mult.	Business term	Rel.	Type	Description
0..*	Coordinate	Att.	Text	A coordinate, expressed as text, for this specified linear ring.

Mult.	Association	Description
Min	Max	
0	1	Specified_ Linear Ring. Coordinate. Specified_ Direct Position The specified direct position of a coordinate for this linear ring.

Specified_ Period

Description: A specified period of time.

Mult.	Business term	Rel.	Type	Description
0..*	Duration	Att	Measure	A measure of the length of time for this specified time period such as hours, days, weeks, months, years.
0..1	Inclusive	Att	Indicator	The indication of whether or not the start and end dates are included in this specified period.
0..*	Description	Att	Text	A textual description of this specified period of time.

Mult.	Business term	Rel.	Type	Description
0..1	Start	Att	Date Time	The date, time, date time or other date time value for the start of this specified period of time.
0..1	End	Att	Date Time	The date, time, date time or other date time value for the end of this specified period of time.
0..1	Complete	Att	Date Time	The date, time, date time or other date time value for a complete specified period of time expressed as a specific month, a specific week, etc.
0..1	Open	Att	Indicator	The indication of whether or not an entity is open during this specified period.
0..1	Season	Att	Code	The code specifying the season for this specified period.
0..1	Identification	Att	Identifier	The unique identifier of this specified period.
0..*	Name	Att	Text	A name, expressed as text, of this specified period.
0..*	Sequence	Att	Numeric	A sequence number for this specified period.
0..1	Start Date Flexibility	Att	Code	The code specifying the flexibility of the start date of this specified period.
0..1	Continuous	Att	Indicator	The indication of whether or not this specified period is continuous.
0..1	Purpose	Att	Code	The code specifying the purpose of this specified period.

Specified_Polygon

Description: A specified figure that is bounded by a finite chain of straight line segments closing in a loop to form a closed chain or circuit and which may contain holes which are similarly defined.

Mult.		Association		Description
Min	Max			
0	*	Specified_ Polygon. Specified_ Linear Ring	Interior.	An interior linear ring specified for this polygon.
1	1	Specified_ Polygon. Specified_ Linear Ring	Exterior.	The exterior linear specified ring for this polygon.

Structured_ Address.

Description: The location, using a structured address format, at which a particular organization or person may be found or reached.

Mult.	Business term	Rel.	Type	Description
0..1	Identification	Att	Identifier	The unique identifier in the structured address
0..1	Postcode	Att	Code	The code specifying the postcode in the structured address.
0..1	Building Name.	Att	Text	The name, expressed as text, of a building, a house or other structure on a street in the structured address
0..1	Street Name.	Att	Text	The name, expressed as text, of a street or thoroughfare in the structured address.
0..1	City Name	Att	Text	The name, expressed as text, of the city, town or village in the structured address.
0..1	Country	Att	Identifier	The unique identifier of a country in the structured address (Reference ISO 3166 and UN/ECE Rec 3).
0..1	City Sub-Division Name	Att	Text	The name, expressed as text, of a sub-division of a city, town or village in the structured address.
0..1	Country Name	Att	Text	The name, expressed as text, of the country in the structured address.
0..1	Country Sub-Division Name	Att	Text	The name, expressed as text, of the sub-division of a country in the structured address.
0..1	Block Name	Att	Text	The block name, expressed as text, for an area surrounded by streets for this structured address.
0..1	Plot Identification	Att	Text	The identification, expressed as text, of the plot for this structured address.
0..1	Post Office Box	Att	Text	The unique identifier, expressed as text, of a container commonly referred to as a box, in a post office or other postal service location, where postal items may be kept for this structured address.
0..1	Building Number	Att	Text	The number, expressed as text, of a building or house on a street at this structured address.

Mult.	Business term	Rel.	Type	Description
0..1	Staircase Number	Att	Text	The number, expressed as text, of a staircase for this structured address.
0..1	Floor Identification	Att	Text	The identification by name or number, expressed as text, of the floor in a building as part of this structured address.
0..1	Room Identification	Att	Text	The identification, expressed as text, of a room, suite, office or apartment as part of this structured address.

5.7 Business rules

The e-Labs messages are used to exchange information between laboratories and concerned parties. The messages contain not any specified business rules.

The different receiving parties may get dedicated content, according to their information requirements and in accordance with the specifications of the observation contract. It is to the Laboratory to implement certain dedicated business rules in a specific occurrence of the message to a certain party.

5.8 Definition of terms

Parties and party roles

Terms	Definitions
Laboratory	The Party under which responsibility a laboratory (a facility that provides controlled conditions in which measurements and observations may be performed) is operated, which performs the measurements and observations on the sample and who produces a report about the measurements, observations and eventually conclusions.
Relation Receiving Party	The Party who is receiving the report regarding the measurements, observations and conclusions related to the sample.
Relation Requesting Party	The Party who is requesting for a laboratory observation on a sample, resulting in a report regarding the measurements, observations and conclusions related to this sample.