

# LaboratoryTestRequest

<b>Version &amp; date</b>	<b>Content</b>	<b>Breaking changes</b>
v1 2020 10 05	<ul style="list-style-type: none"> <li>– Introduction of new eform LaboratoryTestRequest</li> </ul>	Yes, new eform
v2 2020 11 20	<ul style="list-style-type: none"> <li>– Sample location data</li> </ul>	No, only an additional optional field
v3 2020 11 26 in use as of 3/12	<ul style="list-style-type: none"> <li>– Use of LOINC codes for test type and SNOMED CT codes for sample type</li> <li>– Healthcare professional</li> <li>– Standardized date and gender formats</li> </ul>	Extra field values as well as new fields (concept codes for test and sample types)
V4 2021 03 01 in use as of 31/03	<ul style="list-style-type: none"> <li>– Added Version number, Software of sender</li> <li>– Added CTPC</li> <li>– Added Dummy field</li> <li>– Deleted descriptive value for test type and sample type, only concept codes remain</li> </ul>	Extra fields and deleted fields, no new values to existing fields.
V4 2021 06 14 Same xsd, New guidelines!! in use as of 21/06/21		No breaking changes, new guidelines to cover screening for travel and events – to be used as of 21/06/21
V5 2021 06 25 in use as of 28/06/21	Small fixes in XSD and guidelines <ul style="list-style-type: none"> <li>– UNKNOWN allowed in the field ssin</li> <li>– Guidelines corrected for the field phoneNbr</li> </ul>	Backwards compatible with previous version; additional allowed value for ssin

## 0. Context

This document contains information on the LaboratoryTestRequest which the laboratories will receive from:

- GP software packages;
- Tool for collectivities (health inspector, collectivity physician, company doctor);
- Web application for sampling reservation and sample registration;
- Sampling posts with own software.

This is different from both the [LaboratoryTestPrescription](#) (from a prescriber to Sciensano) and the [LaboratoryTestResult](#) (from the laboratories to Sciensano).

The aim of the LaboratoryTestRequest is to standardize the communication flow between the different parties and allow for lower administrative burden on all sites.

Please note that there are some differences in format compared to previously used communication formats. These are all necessary changes to ensure a standardized communication flow and to secure the testing at a large scale in Belgium.

The LaboratoryTestRequest is a message sent to the eHealthBox of the labs containing an XML and a PDF (sometimes 2 PDFs: FR & NL) in attachment.

# 1. Functional description of the XML

Field name	Level	Parent	Field description	Use case tools	XSD	XSD field type	Comment	Data validity field level
eform	Level 1	LaboratoryTestRequest						
version	Level 2	eform	Version of the LaboratoryTestRequest	V4	Mandatory	string	V4 Easier for lab to accept different versions in parallel	
senderSoftware	Level 2	eform	Name of the software provider(s) that created and sent the XML + software version if relevant	Mandatory	Mandatory	string	In case of an issue, the right people can be contacted	
comment	Level 2	eform	Open text field to add more info	Optional	Optional	string	<b>Required for communication for Certificate: Email address (format XXXX@XXXX.XXX)</b>	
prescriber	Level 1	LaboratoryTestRequest	Information about the prescriber of the COVID-19 test			PrescriberType	Field to group underlying data fields	
firstName	Level 2	prescriber	First name of the prescriber of the COVID-19 test	Mandatory	Mandatory	NameType (string, max length 64)	Pseudo prescriber if based on CTPC	
lastName	Level 2	prescriber	Last name of the prescriber of the COVID-19 test	Mandatory	Mandatory	NameType (string, max length 64)	Pseudo prescriber if based on CTPC	
nihii	Level 2	prescriber	Nihii number of the prescriber of the COVID-19 test	Mandatory (11 digits)	Mandatory	NihiiType (8 or 11 digits)	Pseudo prescriber if based on CTPC	Valid nihii - on 8 first digits
forwardResultsTo	Level 1	LaboratoryTestRequest	Nihii number of the physician that should receive the results - do <u>not</u> repeat the prescriber here	Max 3 (11 digits)	Optional, Max 10 occurrences	NihiiType (8 or 11 digits)	If tools ask for 11 digits, a lab can still choose to only use 8 of them	Valid nihii - on 8 first digits

patient	Level 1	LaboratoryTestRequest	Information about the person that requires the COVID-19 test			PatientType	Field to group underlying data fields
firstName	Level 2	patient	First name of the patient	Mandatory	Mandatory	NameType (string, max length 64)	Required for Certificate
lastName	Level 2	patient	Last name of the patient	Mandatory	Mandatory	NameType (string, max length 64)	Required for Certificate
ssin	Level 2	patient	National social security number of the patient or UNKNOWN for non-residents	Mandatory	Mandatory	string (11 digits)	<b>UNKNOWN if no ssin available</b> – ssin (= INSZ = NISS): national / BIS / TER number – <b>when ssin is UNKNOWN firstName, lastName, dateOfBirth are mandatory</b>  Valid ssin*/UNKNOWN
phoneNbr	Level 2	patient	Phone number of the patient	Mandatory	Mandatory	string (max length 20)	If Belgian number, validity can be checked, International format: +Country code
dateOfBirth	Level 2	patient	Additional info about the patient	Not asked in tool	Optional	string	<b>YYYY-MM-DD Required for Certificate</b> – fill in if no SSIN available
gender	Level 2	patient	Additional info about the patient	Not asked in tool	Optional	string	<a href="#">Sex code list</a>
countryOfResidence	Level 2	patient	Additional info about the patient	Mandatory for specific TP Code	Optional	CountryCodeType (string, 2 letters (A-Z))	When a non-free test is not yet paid, the lab needs an address
cityOfResidence	Level 2	patient	Additional info about the patient	Mandatory for specific TP Code	Optional	DetailsType (string, max length 255)	When a non-free test is not yet paid, the lab needs an address
streetOfResidence	Level 2	patient	Additional info about the patient	Mandatory for specific TP Code	Optional	DetailsType (string, max length 255)	When a non-free test is not yet paid, the lab needs an address

postalCodeOfResidence	Level 2	patient	Additional info about the patient	Mandatory for specific TP Code	Optional	DetailsType (string, max length 255)	When a non-free test is not yet paid, the lab needs an address
houseNumberOfResidence	Level 2	patient	Additional info about the patient	Mandatory for specific TP Code	Optional	DetailsType (string, max length 255)	When a non-free test is not yet paid, the lab needs an address
boxNumberOfResidence	Level 2	patient	Additional info about the patient	Mandatory for specific TP Code	Optional	DetailsType (string, max length 255)	When a non-free test is not yet paid, the lab needs an address
freeTextAddress	Level 2	patient	Additional info about the patient	Not asked in tool	Optional	string	When a non-free test is not yet paid, the lab needs an address
healthcareProfessional	Level 2	patient	HCP or not		Optional	Boolean	true/false
sampleLocation	Level 1	LaboratoryTestRequest	Information on the sampling location		Optional	SampleLocationType	Field to group underlying data fields
locationID	Level 2	sampleLocation	ID of the sample location (nihii or other type of ID depending on the type of sampling location)	automatically based on log-in	Optional	string	E.g. for a triage center, it can be their nihii number. For a GP it can be the number of a common practice or their own ID if not linked to a practice.
locationDescription	Level 2	sampleLocation	Name of the sampling location	automatically based on log-in	Optional	string	Place where sampling took place; <b>Required for Certificate</b>
clinicalData	Level 1	LaboratoryTestRequest	Clinical background information			ClinicalDataType	Field to group underlying data fields
symptomsSince	Level 2	clinicalData	Date since when the patient has symptoms	If symptomatic, need date	Optional	string	<b>YYYY-MM-DD</b> date format
Hospitalisation	Level 2	clinicalData	Is the patient hospitalized	Default: NO	Mandatory	DetailsType (string, max length 255)	

testPrescribedReason	Level 2	clinicalData	Reason for doing the COVID-19 test	Mandatory (less options available than in XSD) based on dropdown	Mandatory	TestPrescribed-ReasonType (TP followed by 4 digits)	<a href="#">Test prescribed reason code list</a>	Check TP code with respect to published list of codes
illnessCollection	Level 2	clinicalData	Information on # earlier tests of the same type on the same patient	possibility to look into CTPC database for # of earlier tests? otherwise Default: UNKNOWN	Mandatory	IllnessCollection-Type (string: FIRST, SECOND, MORE_THAN_2, UNKNOWN)		
samples	Level 2	clinicalData	Information about the samples		Mandatory	SamplesType	Field to group underlying data fields	
<b>sample</b>	Level 3	samples	Information about the sample	<b>Max 1</b>	<b>Max 1</b>	SampleType	Field to group underlying data fields	
identificationNumber	Level 4	sample	Unique ID of the sample	Tool optional until sample is taken	Mandatory	string (max length 128)	If no identification number available: Unknown	
CTPC	Level 4	sample	Unique ID coming from the request for testing	Optional (but see comment)	Optional	CTPC type (16 alphanumeric)	<b>Mandatory if available – required for results reporting if no ssin (=NISS=INSZ: national /BIS /TER) is known</b>	Valid CTPC
time	Level 4	sample	The date and the time at which the sample was taken	Tool optional until sample is taken - only allow valid time	Mandatory	string	YYYY-MM-DDThh:mm+01:00; <b>Required for Certificate</b>	valid time
<b>sampleConceptCode</b>	Level 4	sample	The sampling method used		Mandatory	string	<a href="#">Specimen material code list</a> as published by Sciensano	
tests	Level 4	sample	Information about the type of test that is requested			TestsType	Field to group underlying data fields	

**testConceptCode**

Level 5 tests

The type of test to be performed

Mandatory string

[Test code list](#) as published by Sciansano; **Required for Certificate**

## 2. Meta-data in the eHealthBox message

There are 2 possibilities:

- 1) XML and PDF in attachment:

```
<CustomMeta>
  <Key>CM-AttachmentTransportType</Key>
  <Value>EFORMS</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-FunctionalType</Key>
  <Value>EFORMS</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-AttachmentFilename</Key>
  <Value>LabTestRequest_xml_file_name.xml</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-FunctionalType-1</Key>
  <Value>EFORMS-ATTACHMENT</Value>
```

```
</CustomMeta>
<CustomMeta>
  <Key>HC-AttachmentFilename-1</Key>
  <Value>LabTestRequest_pdf_file_name.pdf</Value>
</CustomMeta>
```

2) XML and 2 PDFs in attachment:

```
<CustomMeta>
  <Key>CM-AttachmentTransportType</Key>
  <Value>EFORMS</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-FunctionalType</Key>
  <Value>EFORMS</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-AttachmentFilename</Key>
  <Value>LabTestRequest_xml_file_name.xml</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-FunctionalType-1</Key>
  <Value>EFORMS-ATTACHMENT</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-AttachmentFilename-1</Key>
  <Value>LabTestRequest_pdf_NL_file_name.pdf</Value>
</CustomMeta>
<CustomMeta>
```



```
<Key>HC-FunctionalType-2</Key>
  <Value>EFORMS-ATTACHMENT</Value>
</CustomMeta>
<CustomMeta>
  <Key>HC-AttachmentFilename-2</Key>
  <Value>LabTestRequest_pdf_FR_file_name.pdf</Value>
</CustomMeta>
```

### **3. Possible TP codes**

Please find the TP codes as published by Healthdata:

<https://www.dropbox.com/s/vh8b73avhmzshkr/TestPrescribedReasonCodelist.xlsx?dl=0>

More code lists for the LaboratoryTestRequest are also based on those for the LaboratoryTestPrescription:

<https://covid19lab.healthdata.be/data-collection/laboratorytestprescription>