

SHIELD Standards Partners and Associated Efforts

Standard	Function	Curating Organization	Link
LOINC (Logical Observations Identifiers Names and Codes)	Semantic Standards	A semantic standard that describes the question an IVD asks of a specimen. There are over 55,000 LOINC codes describing each type of IVD test.	Regenstrief Institute https://loinc.org/get-started/what-loinc-is/ https://loinc.org/sars-coronavirus-2/
SNOMED-CT (Systematized Nomenclature of Medicine – Clinical Terms)		A semantic standard used here to describe the results of qualitative tests, e.g., detected, not detected, drug-resistant, etc.	International Health Terminology Standards Development Organization (IHTSDO) https://www.snomed.org/snomed-ct http://snomed.org/covid-19
UCUM (Unified Codes for Units of Measure)		A semantic standard assisting in the application of scientific units to the results of quantitative tests.	Regenstrief Institute http://www.unitsofmeasure.org/trac
UDI (Unique Device Identification System)		A standard identification system for each specific IVD.	Food and Drug Administration (FDA) https://www.fda.gov/medicaldevices/deviceregulationandguidance/uniquedeviceidentification/udidbasics/default.htm
LOINC Manuals	Transmission/Mapping	A standardized way for all IVD manufacturers and labs to ensure the same appropriate LOINC code is assigned to the same type of device. For use with RELMA.	Regenstrief Institute https://loinc.org/guides/micro/
LIVD (Digital Format for Publication of LOINC to Vendor IVD Test Results)		A standard structured format for all IVD manufacturers to send the descriptive codes (listed above) to laboratory for the tests they provide, helping ensure that labs are presented with information in the same format regardless of the manufacturer.	IVD Industry Connectivity Consortium (IICC) https://ivdconnectivity.org/livd/
LAW (Laboratory Analytical Workflow)		A standard enabling plug-and-play ability for an instrument to send IVD descriptive information directly into an LIS.	Clinical Laboratory Standards Institute (CLSI) https://wiki.ihe.net/index.php/Laboratory_Analytical_Workflow_Profile
LIVD FHIR Profile (Fast Healthcare Interchange Resources)		A standardized way to map LIVD content provided by IVD manufacturers into electronic healthcare record	Health-Level 7 (HL7) http://hl7.org/fhir/uv/livd/2018Sep/index.html
SOLOR (SNOMED , LOINC, RxNorm)		A standard to help ensure version control and appropriate association between LOINC, SNOMED-CT, and RxNorm (prescriptions)	Veterans Health Administration (VHA) http://solor.io/
CIMI (Clinical Information Modeling Initiative)		A shared repository to harmonize different clinical models so information can ultimately be presented consistently in front of a clinician.	Logica https://www.hl7.org/Special/Committees/cimi/overview.cfm https://covid-19-ig.logicahealth.org/toc.html