



FINAL DRAFT Amendment

ISO/IEC 19794-14:2022/ FDAM 1

Information technology — Biometric data interchange formats —

Part 14: DNA data

AMENDMENT 1: Conformance requirements

*Technologies de l'information — Formats d'échange de données
biométriques —*

Partie 14: Données ADN

AMENDEMENT 1

ISO/IEC JTC 1/SC 37

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 37, *Biometrics*.

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Information technology — Biometric data interchange formats —

Part 14: DNA data

AMENDMENT 1: Conformance requirements

Clause B.1

Add the following paragraph at the end of the clause:

The Biometric Conformance Test Software (BioCTS) is a freeware developed by the National Institute of Standards and Technology (NIST) to perform conformance tests for various parts of the ISO/IEC 19794 series. One of the supported International Standards is ISO/IEC 19794-14:2022. The software is available for download at <https://www.nist.gov/itl/csd/biometrics-resource-center/biometric-conformance-test-software-biocts/biocts-isoiec>.

B.2.2

Add the following text at the end of subclause B.2.2:

Within Table B.1, a differentiation between requirements and other provisions is indicated through the use of the prefixes "R-x" (requirements) and "P-x" (other provisions). Requirements are mandatory provisions, which are critical for ensuring compliance and are non-negotiable. Other provisions offer options or permissions rather than mandates, giving users discretion in certain situations.

Table B.1

Replace the table with the following:

Table B.1 — Summary of Level 1 and Level 2 requirements and options

Requirement/ Provision ID	Subclause reference	Requirement/Provision summary	Level	Status	IUT sup- port	Supported range	Test result
R-1	6.1	XML documents encoding DNA data shall validate against the XML schema definition in Clause A.1.	1	M			
P-2	6.3.1	A DNA data XML document (DnaData field) may contain a list of representations (Representations field).	1	O			
P-3	6.3.1	A DNA data XML document (DnaData field) may contain a list of pedigrees (Pedigrees field).	1	O			
R-4	6.3.2.2	In an XML document following this document, the version field shall contain major version 4 and minor revision 0.	2	M			
R-5	6.3.2.3	When communication direction is "Response", the transaction field shall contain a TransactionProcessingStatus field.	2	M			
R-6	6.3.2.3	When communication direction is "Response", the transaction field shall contain a TransactionProcessingMessage field.	2	M			
R-7	6.3.2.3	When communication direction is "Response", the transaction field shall contain a RespondingToRequestId field.	2	M			
P-8	6.3.2.4	A sending party of the DNA data XML document (SendingParty field) may contain an OrganizationCode field.	1	O			
P-9	6.3.2.4	A sending party of the DNA data XML document (SendingParty field) may contain an OrganizationPOCName field.	1	O			
P-10	6.3.2.4	A category of the sending or receiving party (PartyCategory field) may contain a UnitCategory field.	1	O			
P-11	6.3.2.4	A category of the sending or receiving party (PartyCategory field) may contain a UnitLocation field.	1	O			
P-12	6.3.2.5	A receiving party of the DNA data XML document (ReceivingParty field) may contain an OrganizationCode field.	1	O			
P-13	6.3.2.5	A receiving party of the DNA data XML document (ReceivingParty field) may contain an OrganizationPOCName field.	1	O			
R-14	6.3.3.1	When the communication direction is "Request", the representation shall contain a Request field.	2	M			
R-15	6.3.3.1	When the communication direction is "Response", the representation shall contain a Response field.	2	M			
P-16	6.3.3.1	A DNA data representation (Representation field) may contain a CaseUr- gencyIndicator field.	1	O			
P-17	6.3.3.1	A DNA data representation (Representation field) may contain a Supple- mentaryMessage field.	1	O			

Table B.1 (continued)

Requirement/ Provision ID	Subclause reference	Requirement/Provision summary	Level	Status	IUT sup- port	Supported range	Test result
R-18	6.3.3.2	If RequestCategory is "Other", then Description shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the Description field.	2	M			
P-19	6.3.3.2	A DNA request (Request field) may contain a UserDefined field.	1	0			
P-20	6.3.3.2	A DNA request (Request field) may contain a Description field.	1	0			
P-21	6.3.3.2	A user defined request (UserDefined field) may contain a TypeCode field.	1	0			
R-22	6.3.3.3	If ResponseCategory is "Other", then Description shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the Description field.	2	M			
R-23	6.3.3.3	If ResponseCategory is "MatchCandidate", the Response field shall contain a RespondingToProfile field.	2	M			
R-24	6.3.3.3	If the response contains a pedigree, the Pedigrees/ Pedigree/ Response field shall contain a RespondingToPedigree field. Although the XSD technically permits RespondingToPedigree to appear under DnaData/ Representations/ Representation, this requirement is intended to ensure that the RespondingToPedigree is specifically included in the pedigree response, rather than in the Representation.	2	M			
P-25	6.3.3.3	A DNA response (Response field) may contain a UserDefined field.	1	0			
P-26	6.3.3.3	A DNA response (Response field) may contain a MatchQuality field.	1	0			
P-27	6.3.3.3	A DNA response (Response field) may contain a Description field.	1	0			
P-28	6.3.3.4	A DNA profile identification block (DnaProfileIdBlock field) may contain a CountryCode field.	1	0			
P-29	6.3.3.4	A DNA profile identification block (DnaProfileIdBlock field) may contain a FederalStateCode field.	1	0			
P-30	6.3.3.4	A DNA profile identification block (DnaProfileIdBlock field) may contain an OrganizationCode field.	1	0			
R-31	6.3.3.6	If RepresentationCategory is "Other", then SupplementaryMessage shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the SupplementaryMessage field.	2	M			
P-32	6.3.3.7.1	The donor of a DNA data representation (RepresentationDonor field) may contain a DonorVitalStatus field.	1	0			
P-33	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a DateAndTimeOfAnalysis field.	1	0			
P-34	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a BatchId field.	1	0			
P-35	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a KitId field.	1	0			

Table B.1 (continued)

Requirement/ Provision ID	Subclause reference	Requirement/Provision summary	Level	Status	IUT sup- port	Supported range	Test result
P-36	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an ErrorMessage field.	1	0			
P-37	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a DnaDataComment field.	1	0			
P-38	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a SampleCollectionDate field.	1	0			
P-39	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a SampleCellKind field.	1	0			
P-40	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a SampleCollectionMethod field.	1	0			
P-41	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a SampleCollectionParty field.	1	0			
P-42	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a SampleCollectionLocation field.	1	0			
P-43	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a SampleCollectionGeoLocation field.	1	0			
P-44	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a DnaExpertSystem field.	1	0			
P-45	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a DnaAnalysisParty field.	1	0			
P-46	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a ProfilePartialIndicator field.	1	0			
P-47	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an InstrumentManufacturer field.	1	0			
P-48	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an InstrumentSerial field.	1	0			
P-49	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an InstrumentSoftwareVersion field.	1	0			
P-50	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an InstrumentModel field.	1	0			
P-51	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a LowTemplateDnaIndicator field.	1	0			
R-52	6.3.3.10.1	When DNA typing technology is "STR", the DNA data block shall contain a LocInformation field.	2	M			

Table B.1 (continued)

Requirement/Provision ID	Subclause reference	Requirement/Provision summary	Level	Status	IUT support	Supported range	Test result
R-53	6.3.3.10.1	When DNA typing technology is "mtDNA", the DNA data block shall contain a MitoFragments field.	2	M			
P-54	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a DnaFsaList field.	1	O			
P-55	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an Electropherogram field.	1	O			
P-56	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a VendorSpecificData field.	1	O			
R-58	6.3.3.10.2	If DnaTypingTechnology is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			
P-59	6.3.3.10.4	The party responsible for a DNA data analysis (DnaAnalysisParty field) may contain an OrganizationCode field.	1	O			
P-60	6.3.3.10.4	The party responsible for a DNA data analysis (DnaAnalysisParty field) may contain an OrganizationPOCName field.	1	O			
R-61	6.3.3.10.7	If LabCertificationValue is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			
R-62	6.3.3.10.7	If ScopeOfAccreditation is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			
R-63	6.3.3.10.11	If SampleCellKind is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			
P-64	6.3.3.10.13	The party responsible for the sample's collection (SampleCollectionParty field) may contain an OrganizationCode field.	1	O			
P-65	6.3.3.10.13	The party responsible for the sample's collection (SampleCollectionParty field) may contain an OrganizationPOCName field.	1	O			
R-66	6.3.3.10.18	If InstrumentManufacturer is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			
R-67	6.3.3.10.21	If InstrumentModel is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			
R-68	6.3.3.10.22	If LocusCategory is "Other", then DnaDataComment shall exist, cannot be null or zero-length string, and shall contain text since details shall be included in the DnaDataComment field.	2	M			

Table B.1 (continued)

Requirement/Provision ID	Subclause reference	Requirement/Provision summary	Level	Status	IUT support	Supported range	Test result
P-69	6.3.3.10.23	The header information of a locus (LocusHeader field) may contain a BatchId field.	1	0			
P-70	6.3.3.10.23	The header information of a locus (LocusHeader field) may contain a KitId field.	1	0			
P-72	6.3.3.10.24	A mitochondrial DNA fragment (MitoFragment field) may contain a MitoFragmentLength field.	1	0			
P-73	6.3.3.10.24	A mitochondrial DNA fragment (MitoFragment field) may contain a MitoFastaSequence field.	1	0			
P-74	6.3.3.10.24	A mitochondrial DNA fragment (MitoFragment field) may contain a MitoPolymorphism field.	1	0			
P-75	6.3.3.10.24	A mitochondrial DNA polymorphism (MitoPolymorphism field) may contain a MitoPolymorphismOffset field.	1	0			
P-76	6.3.3.10.25	A DNA fragment sequence analysis (DnaFsa field) may contain an Id field.	1	0			
P-77	6.3.3.10.26	A DNA electropherogram (Electropherogram field) may contain an ImageId field.	1	0			
R-78	6.3.3.10.27	The vendor-specific data field shall consist of a type code and a binary data block of that type as specified in ISO/IEC 19794-1:2011/Amd. 2:2015.	2	M			
P-79	6.3.4.1	When communication direction is not "Request", a Pedigree field may contain a pedigree ID list (Pedigreelds field).	1	0			
P-80	6.3.4.1	A Pedigree field may contain a DateMissingPersonDisappeared field.	1	0			
P-81	6.3.4.1	A Pedigree field may contain a LocationMissingPersonDisappeared field.	1	0			
P-82	6.3.4.1	A Pedigree field may contain a PedigreeComment field.	1	0			
R-83	6.3.4.1	When communication direction is "Request", a Pedigree field shall contain a Request field.	2	M			
R-84	6.3.4.1	When communication direction is "Response", a Pedigree field shall contain a Response field.	2	M			
R-85	6.3.4.7	A Pedigree field shall contain a PedigreeMembers field.	1	M			
P-86	6.3.4.7	A PedigreeMember field may contain a PedigreeMemberIds field.	1	0			
P-87	6.3.4.7	A PedigreeMember field may contain a MotherId field.	1	0			
P-88	6.3.4.7	A PedigreeMember field may contain a FatherId field.	1	0			
R-89	6.3.1	When CommunicationDirection is "Request", then at least one element of Representation or Pedigree shall exist.	2	M			
R-90	6.3.2.3	TransactionID cannot be null or zero-length string and shall contain text.	1	M			