



**International  
Standard**

**ISO/IEC 19794-14**

**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: Exigences de conformité*

**Second edition  
2022-10**

**AMENDMENT 1  
2025-03**

iTeh Standards  
(<https://standards.itih.ai>)  
Document Preview

ISO/IEC 19794-14:2022/Amd. 1:2025

<https://standards.itih.ai/standards/iso-iec-19794-14-2022-amd-1-2025>

**iTeh Standards**  
**(<https://standards.iteh.ai>)**  
**Document Preview**

[ISO/IEC 19794-14:2022/Amd 1:2025](https://standards.iteh.ai/catalog/standards/iso/8953ba66-7aaf-47d0-9388-287920c1333b/iso-iec-19794-14-2022-amd-1-2025)

<https://standards.iteh.ai/catalog/standards/iso/8953ba66-7aaf-47d0-9388-287920c1333b/iso-iec-19794-14-2022-amd-1-2025>



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives) or [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs)).

ISO and IEC draw attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO and IEC take no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO and IEC had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents) and <https://patents.iec.ch>. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html). In the IEC, see [www.iec.ch/understanding-standards](http://www.iec.ch/understanding-standards).

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

A list of all parts in the ISO/IEC 19794 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html) and [www.iec.ch/national-committees](http://www.iec.ch/national-committees).



# 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 support	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 CaseUrGENCYIndicator field.	1	O			
P-17	6.3.3.1	A DNA data representation (Representation field) may contain a SupplementaryMessage 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 sup- port	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	0			
P-55	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain an Electropherogram field.	1	0			
P-56	6.3.3.10.1	A DNA data block (DnaDataBlock field) may contain a VendorSpecificData field.	1	0			
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	0			
P-60	6.3.3.10.4	The party responsible for a DNA data analysis (DnaAnalysisParty field) may contain an OrganizationPOCName field.	1	0			
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	0			
P-65	6.3.3.10.13	The party responsible for the sample's collection (SampleCollectionParty field) may contain an OrganizationPOCName field.	1	0			
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 Imaged 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			