



DPC: 24/30469911 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

Date: 10 December 2024

Origin: International

Latest date for receipt of comments: 03 February 2025

Project No. 2023/00373

Responsible committee: IST/37 Coding of picture, audio, multimedia and hypermedia information

Interested committees:

Title: Draft BS ISO/IEC 23092-5 :2020 Amd 1 Information technology - Genomic information representation. Part 5: Conformance. Amendment 1: Version 2 and Part 6 support.

Please notify admin.start@bsigroup.com if you are aware of any keywords that might assist in clarifying or identifying the standard or of the content of this standard:

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD. THIS DRAFT IS NOT CURRENT BEYOND 03 February 2025

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop <http://shop.bsigroup.com> or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from <https://standardsdevelopment.bsigroup.com/>.

E-mail: admin.start@bsigroup.com

Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
------------------	------------------------

1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



DRAFT Amendment

ISO/IEC 23092-5:2020/ DAM 1

Information technology — Genomic information representation —

Part 5: Conformance

AMENDMENT 1: Version 2 and Part 6 support

ICS: 35.040.99

ISO/IEC JTC 1/SC 29

Secretariat: JISC

Voting begins on:
2024-12-10

Voting terminates on:
2025-03-04

This document is circulated as received from the committee secretariat.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENTS AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

Reference number
ISO/IEC 23092-5:2020/DAM 1:2024(en)

© ISO/IEC 2024  **Documents**
Document Sharing Hub



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2024

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
Website: www.iso.org

Published in Switzerland

Information technology — Genomic information representation —

Part 5: Conformance

AMENDMENT 1: Version 2 and Part 6 support

Replace the text “ISO/IEC 23092-1 and ISO/IEC 23092-2

” in ISO/IEC 23092-5 text in clause 6 with the following:

ISO/IEC 23092-1, ISO/IEC 23092-2, and ISO/IEC 23092-6

ISO/IEC 23092-5 Clause 6

Renumber the clause to 9

Insert the following new sections in the ISO/IEC 23092-5 text.

6 ISO/IEC 23092-6 conformance

6.1 Definition of ISO/IEC 23092-6 conformance

6.1.1 Assumptions

In this document, the following assumptions are made in reference to ISO/IEC 23092-6:

The term ‘bitstream’ means ISO/IEC 23092-6 bitstream.

The term ‘decoder’ means ISO/IEC 23092-6 decoder, i.e. an implementation of the decoding process specified by ISO/IEC 23092-6. The output of a decoder is specified in ISO/IEC 23092-6:2023, Clause 10.

If any statement made in this clause accidentally contradicts a statement or requirement in ISO/IEC 23092-6, the text of ISO/IEC 23092-6 prevails.

The following subclauses specify the tests to verify conformity of bitstreams and decoders. Those tests make use of test data (bitstream test items and reference outputs) made available as specified in Clause 6 and of the reference software specified in ISO/IEC 23092-4, with source code available as described in ISO/IEC 23092-4.

6.1.2 Definition of ISO/IEC 23092-6 bitstream conformity

An ISO/IEC 23092-6 bitstream is a bitstream that conforms to the specification defined by ISO/IEC 23092-6.

A conformant bitstream shall meet all the requirements and implement all the restrictions in the syntax defined by ISO/IEC 23092-6.

Subclause 6.3 defines the test that a bitstream shall pass successfully in order to be claimed in conformity with this document.

6.1.3 Definition of ISO/IEC 23092-6 decoder conformity

An ISO/IEC 23092-6 decoder is an implementation of the process defined by the requirements of ISO/IEC 23092-6.

A conformant decoder shall meet all the requirements and implement all the restrictions in the syntax defined by ISO/IEC 23092-6.

Subclause 6.4 defines the test procedure and the tests that a decoder shall pass successfully in order to be claimed in conformity with ISO/IEC 23092-6.

A conformant decoder shall implement a decoding process that is equivalent to the one specified in ISO/IEC 23092-2 and meets all the general requirements defined in ISO/IEC 23092-6.

A decoder that fails one or a part of the tests defined by subclause 6.4 shall not claim conformity to ISO/IEC 23092-6.

In the following subclauses the term 'reference decoder' means the reference software decoder (ISO/IEC 23092-4), which is the decoder that implements the above-mentioned decoding process.

Fundamental requirement areas for decoders and their mapping to functionality under test are listed in Table 4.

6.2 Requirements and functionality under test

Table 9 — Requirement areas for ISO/IEC 23092-6

Requirement area	Functionality
Parameter set	Decoder configuration
Coding of genomic variant data	Entropy decoding of descriptor streams
Coding of contact matrix data	Entropy decoding of descriptor streams
Coding of gene expression data	Entropy decoding of descriptor streams
Coding of functional annotation data	Entropy decoding of descriptor streams
Coding of track data	Entropy decoding of descriptor streams

6.3 Procedure to test bitstream conformity

The ISO/IEC 23092 series reference software (ISO/IEC 23092-4) contains the source code of a software decoder that checks that a bitstream implements properly the specification defined in ISO/IEC 23092-6.

A bitstream that claims conformity with ISO/IEC 23092-6 shall pass the following test:

When processed by the reference software, the bitstream shall not cause errors or non-conformity messages. This test shall be run only on bitstreams that are known to be free of errors introduced by transmission.

To verify the correctness of a bitstream, it is necessary to parse the entire bitstream and to decode all the syntactic elements and values derived from those syntactic elements used by the decoding process specified in ISO/IEC 23092-6. This verification does not necessarily perform all stages of the decoding process in ISO/IEC 23092-6 (e.g. generation of MPEG-G records as specified in 23092-6, Clause 10).

6.4 Procedure to test decoder conformity

This document contains standard test bitstreams in digital form; it also contains the standard reference output of each test bitstream as generated by the reference software (ISO/IEC 23092-4).