	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 40 of 88

CERTIFICATION SCHEME FOR BEER

1 Scope

This document specifies the scheme for the evaluation of conformity of beer to their corresponding product specification standards CES 52, including certification of conformity by a certification body.

This scheme provides technical rules for factory production control by the manufacturer, including, sampling, and testing of samples and products, tasks of the certification body and other stakeholders. It also provides rules/procedures for actions to be followed in the case of non-conformity, the procedure for the certification of conformity and requirements for dispatching centers.

2. Normative references

The following documents are indispensable for the application of these conformity evaluation criteria.

CES 52 specification for beer

ISO/IEC 17065 requirements for bodies certifying products, processes and services

ISO/IEC 17067 fundamentals of product certification and guideline for product certification scheme

ISO/IEC 17025 general requirement for the competence of testing and calibration laboratories

3. Definitions and abbreviations

For the purposes of this document (specific certification scheme), the terms and definitions given in ES ISO 17000, CES 52 and the followings shall apply:

3.1 Definitions

3.1.1 Certificate of conformity


A Document issued under the rules of this scheme for the evaluation of conformity indicating that adequate confidence is provided that beer is in conformity with the relevant product specification standard, regulatory and statutory requirements.

4 Specific conditions for beer production

4.1 Management systems

4.1.1 Quality manual

The manufacturer's documentation system and procedures with respect to factory quality production control shall be described in detail in the quality product manual. The quality production manual shall adequately describe, among other that:

	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 41 of

- a) The quality aims (objectives) and the organizational structure, responsibilities and authorities of the management with regard to product quality and the means to monitor the achievement of the required product quality and the effective operation of the internal quality control.
- b) The manufacturing and quality control techniques, processes and systematic actions that will be used.
- c) The inspections and tests that will be carried out before, during and post manufacturing (storage and distribution) and the frequency of inspection and testing activities. The quality manual prepared by each manufacturer shall include an adequate system of documentation.

The quality manual shall address and document the procedures implemented to ensure that the manufactured Beer conforms to the technical specifications. The manual may refer to associated documents which provide further details of the internal quality control system. The quality manual shall be considered to include these associated documents for the purpose of product certification scheme,

NOTE: In the case of an existing quality management system according to ES ISO 9001, the certification body may examine the clients' management system.

4.1.2 Quality policy statement

The quality manual shall include a statement developed by management defining its quality policy, objectives and commitments to the attainment of product quality, handling of non-conforming product, record and document control system.

4.1.3 Management representative

The manufacturer shall appoint a management representative who, irrespective of other responsibilities, shall have defined authority and responsibility for ensuring that the requirements of this certification scheme, for the evaluation of conformity are implemented and maintained.

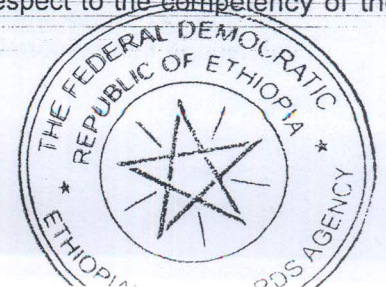
4.1.4 Internal audits and management review


In order to ensure the continuing suitability and effectiveness of the quality manual and the requirements of this certification scheme, the manufacturer shall perform internal audit and management review at least once a year:

- a) The Internal audit shall take in to consideration the scope of this certification scheme.
- b) A management review of the factory production control shall take into account records of the internal audits.

4.1.5 Training

The quality manual shall describe the measures to be taken to ensure that all the personnel involved in operations that can affect internal quality control and product quality have appropriate relevant educational level and field, experience and trainings. Moreover, relevant records with respect to the competency of the experts shall be retained.



	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 42 of 48

4.2 System of documentation

4.2.1 Document control

The management representative shall be responsible for the control of all documents and data related to factory production control and to this document for the evaluation of conformity. In addition He /She shall ensure all appropriate documents are available at essential locations. All outdated documents shall be withdrawn and that changes or modifications to any document shall be made effectively and timely. A master list which comprises the current version of all necessary documents shall be prepared in order to prevent misuse of the documents.

4.2.2 Quality records

The manufacturer shall retain records of factory production control for at least the period required to comply relevant legislation.

4.2.3 Documents of quality control

The manufacturer shall establish documented procedures and appropriate test methods to ensure that the produced beer meet the requirements of product specification CES 52 and establish suitable critical control points to ensure effective and sustainable process control measure.

The quality manual shall describe the methods used by the manufacturer to ensure that the beer produced conforms to the product specification, including appropriate test methods.

4.3 Internal quality control

4.3.1 Process control

4.3.1.1 General

The working quality manual shall describe in detail the parameters for process planning, process control and testing, inspection, corrective action, verification, dispatch, critical control points and the associated records.

4.3.1.2 Constituents and composition of beer


The manufacturer shall establish and document procedures and appropriate test methods to ensure that the constituents of the Beer meet the requirements of the relevant product specification standard and (are suitable to enable the beer to be produced meet the technical specifications.

The quality manual shall describe the methods used by the manufacturer to ensure that the composition of the beer produced conforms to the relevant product specification standard, including appropriate test methods.

4.4 Control of non conforming products

4.4.1 Control of non conforming products

The quality manual shall contain non conforming product handling procedures or any means that shows how to manage non conforming product(s).

	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 43 of

4.4.2 Corrective action

The quality manual shall include procedures for the review and adjustment of the factory production control in case of non-conformity. The actions which are taken in the case of non-conformity shall be recorded in a report subject to inspection during the management review. In the case of beer with a test results which show not conforming to the single result limit value conformity criteria specified in CES 52 product specification, the manufacturer shall immediately determine the affected quantity, take appropriate action to prevent the dispatch of this quantity and inform the affected customer if such beer has been released. Moreover, the manufacturer shall immediately uncover the cause of such non-conformity, take corrective actions and undertake a review of all relevant factory production control procedures. All such actions and findings shall be appropriately recorded in a report subject to inspection during the management review.

NOTE: The certification body may require to be kept informed of these actions and findings.

4.5 Measuring and testing

4.5.1 Inspection, measuring and test equipment

The equipment for in -process inspection and testing shall be regularly checked and calibrated in accordance with the procedures and frequencies lay down in the quality manual.

4.5.2 Inspection and test status

Procedures for the inspection and test status at the level of manufacture shall be detailed in the quality manual. These shall include procedures for the control of non conforming intermediate materials.

4.5.3 Handling Packaging, storage and delivery

The quality manual shall describe the precautions to be taken for the protection of the quality of the beer while under the responsibility of the manufacturer. It shall include description of the procedures used at beer warehouse. Delivery documentation shall allow traceability to the products.

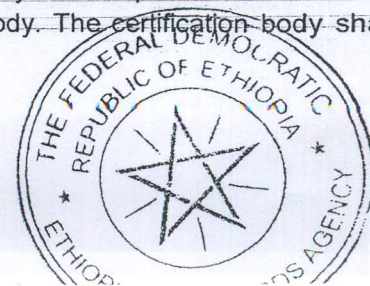
4.5.4 Sampling and testing


The manufacturer shall design and operate testing system for each certified beer product. This system shall be used to demonstrate conformity to the requirements in the relevant product specification standard. The properties to be tested, the testing methods, the minimum frequency of testing during routine and initial period testing and the conformity criteria shall be in accordance with the basic requirements given in the relevant product certification standard. For beer not being dispatched continuously, the frequency of testing and the point of sampling shall be as specified in the quality manual. All test result data shall be documented properly.

4.6 Tasks of certification body

4.6.1 General

The certification body has responsibility for three separate functions; certification, inspection and testing. These three functions may be carried out by one body or by more than one body. The inspection function may be carried out by an inspection body and the testing function by a testing body. The certification body shall



	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 44 of 50

comply with clauses ISO/IEC Guide 65, and ISO 17025 which are relevant to this scheme for the evaluation of conformity.

4.6.2 Surveillance, assessment and acceptance of the factory production

4.6.2.1 Inspection tasks

The inspection tasks include surveillance, assessment and acceptance of the factory production control operated by the manufacturer. Inspection shall include checking any major change in the quality manual which is relevant to the factory production control of beer has been reported to the certification body by the producer within one month of its implementation. Inspection shall verify that the factory production control complies with the requirements of clause 4.2.3 of this certification scheme and has been carried out as stated in the Working quality manual.

4.6.2.2 Frequency of inspections

The inspections shall normally be carried out every quarter of the year and the certification body shall inform the producer in advance when inspection is to be conducted.

4.6.2.3 Reports

Following each inspection, a confidential report shall be prepared and sent to the manufacturer. The certification body shall consult, if necessary; the manufacturer before corrective action is taken. The certification body and the manufacturer shall have consultation before decision is made by either of them. The certification body shall then make a decision on its final assessment.

4.7 Evaluation

4.7.1 Evaluation tasks

Surveillance, assessment and acceptance or deny of the factory production control mechanisms includes evaluation of the test results of the manufacturer's test results to check conformity with the statistical conformity criteria and single result limit values in the relevant product specification standard.

4.7.2 Frequency and time of evaluations


The frequency of evaluation shall be at least twice a year and the time of evaluation shall be decided, as appropriate, by the certification body.

4.7.3 Control period

The length of the control period for evaluation of the test results shall be decided in advance through consultation of manufacturer and Conformity Assessment Body.

4.7.4 Evaluation of test results

Each evaluation shall be based on the test results of appropriate samples.

	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 45 of 1

NOTE: The evaluation of the test results should exclude any test result accepted as an outlier by the certification body.

In the case of managed step changes in product properties or in the case of limited production or dispatching runs during the control period the corresponding data sets may be evaluated separately.

The evaluations may normally be carried out by correspondence and each evaluation shall lead, for the property examined, to a single conclusion in respect of the set of test results as a whole.

4.7.5 Surveillances

CB shall conduct Surveillance audit factory in accordance with its surveillance audit procedure and shall be conducted every quarter and renew the certificate every year. The surveillance shall include market surveillance. The representative sample shall be taken in each surveillance period.

4.7.6 Re-certification audit

CB shall conduct re-certification audit every 3 years. A re-certification audit takes place prior to end of a certification period. The audit shall be planned in due time, in order to avoid expiration of the certificate.

Note:

- A failure to perform the re-certification audit before the expiration of the certificate results in the interruption of the certification cycle. In this case, the wording "certified since" cannot be included on the certificate.
- If a re-certification is conducted after the expiry of a certificate, Initial audit shall be carried out.

4.7.7 Reports

Following each evaluation a confidential report shall be prepared and sent a copy to the manufacturer.

4.8 Testing of samples taken at the factory/depot and initial type testing


4.8.1 Sampling

Samples shall be taken under the responsibility of the certification body at the point(s) of release of the beer and/or beer warehouses of the factory.

4.8.2 Number of samples

The number of samples to be taken shall be done according to ES ISO 13690, Cereal, pulses and milled products – Sampling of static batches and ES ISO 6644:2001, Cereals and milled cereal products – Random sampling by mechanical means. The first sample of a beer to be certified is used for initial type testing. The number of samples to be taken during the initial period shall be at least one per month.



	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 46 of 88

4.8.3 Properties and test methods

The mechanical, physical, biological and chemical properties specified for testing in the clause entitled "Conformity criteria" in the relevant product specification standard shall be determined according to the indicated test methods.

The source of all the testing standards of beer to be used for testing shall be as agreed between the producer and the certification body.

4.8.4 Testing

The methods used to take and prepare samples shall be in accordance with each standard of test methods. One sub-sample shall be retained by the producer for testing and one shall be packed, sealed, clearly labeled and forwarded to the testing laboratory. The third sub-sample shall be sealed and retained by the producer for a minimum period of two months. It is intended for use if:

- a) One of the first two sub-samples is lost, deteriorates contaminated;
- b) Further testing is needed in the case of dispute.

The first two sub-samples shall be tested, one by the manufacturer and one by the testing laboratory, for the required properties as listed in the relevant product certification standard, using the test methods indicated in that standard.

4.8.5 Evaluation of test results

The results obtained shall be evaluated by the certification body.

4.2.8.6 Reports

Following each evaluation of audit test results, a confidential report shall be prepared and send a copy to the manufacture without delay.

4.8.7 Inter comparison or Proficiency testing

The testing laboratory shall carry out regular inter comparison or proficiency testing involving comparison of test results with other testing laboratories for the sake of external quality assurance.


4.9 Initial inspection of the factory and the factory production control

4.9.1 Inspection of a new factory

In the case of a new factory, an initial inspection of the factory and the factory production control shall be made, based on the information about the factory production control mechanism and the equipment used by the factory to produce the beer.

The inspection shall include, among other:

- a) Verify that the quality manual complies with the requirements of 4.2.1

	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 47 of 1

b) Verify that the equipment used to produce and test the beer shall be calibrated.

4.9.2 Inspection of an existing factory

In the case of existing factory, information on any significant changes concerning the factory production control and the equipment shall be considered. Any major change in the quality manual shall be inspected to verify that it meets the relevant criteria.

4.9.3 Criteria for the assessment of the production equipment

The inspection shall assess the suitability of the production equipment in relation to the quality manual and in relation to providing the ability to meet the requirements of the relevant product certification standard. The following criteria shall be considered:

- a) The constituent as described in the relevant product certification standard shall be protected against contamination within the factory.
- b) Equipment shall be suitable for continuous mass production of beer, allowing control of production with sufficient accuracy to ensure that the conformance of the product to the requirements of the relevant product certification standards.
- c) Measures shall be taken to prevent the mixing of different beer during conveying and storage.
- d) Each beer shall be stored in accordance to CES 52.
- e) Points where beer is released from the factory and/or depot shall allow samples to be taken in accordance with the methods in ES 829.

4.9.4 Criteria for the assessment of laboratories

The laboratory responsible for carrying out testing shall have at least the equipment needed to carry out tests for the properties indicated in the standard or be able to outsource to other laboratory which is proved to be competent.

The laboratories shall demonstrate the ability to provide results within a time and in a manner suitable for the manufacturer's factory production control.

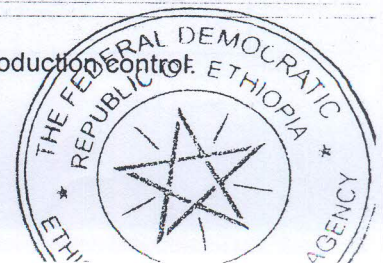
4.9.5 Reports


Following any inspection, a confidential report shall be prepared and a copy sent to the producer without delay.

4.10 Declaration of conformity

The declaration of conformity of beer is made by the manufacturer following the certification of the factory production control by the certification body. The declaration of conformity shall include:

- a) The name and address of the manufacturer and of the factory;
- b) The name and address of the certification body which certifies the factory production control.



	ETHIOPIAN STANDARDS AGENCY	Beer scheme	
	Annex 2 (Normative) PRODUCT CERTIFICATION SCHEME	Issue:2014	Page 48 of 80

c) The standard designation of the beer according to CES 52 (Labeling and marking shall be as specified in the product specification, CES 52).

d) Statements the beer conforms to requirement of and CES 52 and the evaluation of conformities described in this and other relevant certification scheme.

e) The date of issue of the declaration and the certificate of factory production control.

4.11 conformity mark

The declaration of conformity entitles the manufacturer to use the conformity mark on packaging and documentation used for the declared beer (where it is required).

4.12. Actions to be taken by the manufacturer in the case of non-conformity

The control of non-conforming beer and the corrective actions to be taken by the manufacturer are mentioned in 4.2.3.1.5 and 4.2.3.1.6 of this certification scheme and are the full responsibilities of the manufacturer which he /she shall document in accordance to the procedure in the quality manual.

4.13 Samples

The manufacturer shall determine the sampling points and necessary inspections points, and conduct testing as specified in Table 4.13.1 and 4.13. 2.

Table 4.13.1: Raw Material Testing and Inspection Plan

No.	Parameters	Acceptance Criteria	Method of test	Frequency of test	Frequency of sampling and number of samples

Finished product testing plan shall be in accordance to (Table 4.13.2, 4.13.3 & 4.13. 4)

Table 4.13.2: Physical requirements of Beer

Characteristic	Requirement			Test method
	Light Beer	Strong Beer	Extra Strong Beer	
Colour	Minimum 6 European Brewery Congress (EBC)	Minimum 6 European Brewery Congress (EBC)	Minimum 6 European Brewery Congress (EBC)	Analytical -EBC