




ETHIOPIAN STANDARDS



PRODUCT CERTIFICATION SCHEME FOR- CSB

In accordance with CES 139-corn soya blend plus-Requirements



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Certification scheme for super cereal corn soya blend plus (sc - CSBP) – Requirements and guidelines

0. Introduction

This product certification scheme for super cereal corn soya blend plus based on CES 139 was developed by ESA is therefore deemed the scheme owner in terms of ISO/IEC 17067 “Conformity assessment – Fundamentals of product certification and guidelines for product certification schemes”.

This product certification scheme was prepared by Technical Committee and reflects a type 5 product certification scheme as described in ISO/IEC 17067. It includes the following functions, activities and elements.


a) Selection including:

- 1) specified requirements for the products covered by the scope of the scheme,
- 2) Elements of the production process to be assessed and of the management system to be audited,
- 3) Determination activities, and the basis on which those activities be undertaken
- 4) Sampling methods and frequency
- 5) Requirements which the applicant/licencee has to fulfill in order to gain and maintain certification of the product and
- 6) Any other certification requirements.

b) Determination: this certification scheme includes:

- 1) Evaluation of the product,
- 2) Assessment of the production process and audit of other elements of the client’s management system critical to managing product conformity through document review and onsite assessment;

c) Review of the evaluation results, decision on certification and attestation of conformity

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d) Licensing and control of the mark including:


- 1) National quality of conformity,
- 2) Publicity to applicants/licencees,
- 3) misuse of certification and marks of conformity;

e) Surveillance: this certification scheme includes:

- 1) Testing and inspection of product samples,
- 2) Assessment of the production process and audit of the management system;

f) Suspending and withdrawing a certification and license ; and

g) Managing changes affecting certification

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1. Scope

This product certification scheme covers super cereal corn soya blend plus for human consumption in accordance with compulsory Ethiopian standards CES 139 that includes: Pre-Requirements; Application, Testing or inspection of samples of the product from the production facility or dispatching centers; Assessment of the production processes; tasks of the certification body and other stakeholders, audit of the management system supporting the production processes; and Surveillance procedures. 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 Ethiopian Standard contains provisions, which, through reference to this text, constitute provisions of this specific certification scheme. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agree based on these Ethiopian Standards are encouraged to investigate the possibility of applying the most recent editions of the Ethiopian Standards indicated below. Registers of currently valid standards are maintained in the Ethiopian Standards Agency.

CES 139, Prepackaged and prepared foods –Super cereal corn soya blend plus (SC -CSBP) – Requirements and guidelines

ES ISO /IEC 17067, Conformity assessment — Fundamentals of product certification and guidelines for product certification schemes

ESA/PCSM/001, Product certification scheme policy manual

ES ISO 9001:2008, Quality management system

ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories.


Directive for the ES Mark Licensing

3. Terms and definitions

For the purposes of this document, the terms and definitions given in ES ISO 17000, CES 139 and the followings shall apply:

3.1. Super cereal – corn soya blend plus (SC-CSBP)

A complementary food prepared from partially pre-cooked blend of mild heat treated corn and soya bean fortified with vitamins and mineral premix of which the ingredients are partially cooked through wet or dry extrusion or roasting.

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4. GENERAL REQUIREMENTS:

4.1. Registration

An organization that intends to be certified on the CES 139 super cereal corn soya blend plus certification scheme shall have completed the registration process with the conformity assessment body according to the general requirement stated in ESA/PCSM/001 general requirement.

4.2. Verification

CSB reserves the right to verify the authenticity of any documents of certification submitted by an applicant according to ESA/PCSM/001 general requirement.

4.3. Conformance/Compliance

Before making application, and on an ongoing basis, the organization shall ensure that it meets the requirements of this product certification scheme according to ESA/PCSM/001 general requirement. .

4.4. Application

ESA shall provide the applicant with all information necessary to understand and follow the rules for this certification scheme according to ESA/PCSM/001 general requirement. .

4.5. Application Review


Once the application is received from the applicant, CSB shall confirm that the information provided by the applicant is clear and sufficient and, if not, shall request the applicant client for the necessary clarification or additional information. If this has been satisfactorily achieved, the applicant shall be subject to the CSB certification processes which involve evaluation of the product and auditing of the quality and production system of the applicant. In the event that CSB has rejected the client application, the Certification Services Manager shall formally write to the client stating the reasons according to ESA/PCSM/001 general requirement.

4.6. Management systems

4.6.1. Quality manual

The manufacturer's documentation system and documents of 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 others,

- 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.

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The quality manual shall address and document the procedures operated to ensure that the manufactured wheat flour 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,

4.6.2. Quality policy statement

Top management shall establish, implement and maintain a quality policy that:

- a. is appropriate to the purpose and context of the organization and supports its strategic direction;
- b. provides a framework for setting quality objectives;
- c. includes a commitment to satisfy applicable requirements;
- d. includes a commitment to continual improvement of the quality management system.
- e. 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.
- f. The organization shall determine external and internal issues that are relevant to its purpose and its strategic direction and that affect its ability to achieve the intended result(s) of its quality management system.

4.6.3. 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 cover the scope of clause 4 of this certification scheme.
- b) A management review of the factory production control shall take into account the records of the internal audits.

4.7. 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.

4.8. Quality records

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

4.9. Documents for quality control

The manufacturer shall establish documented procedures and appropriate test methods to ensure that the produced wheat flour meet the requirements of product specification (CES 139) and establish suitable critical control points to ensure effective and sustainable process control measure.

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

4.10. Internal quality control

4.11. General

The Quality Manual documentation shall describe:

- a) Parameters for production process;
- b) Validated procedures for testing other than test methods specified in CES 139 (if any);
- c) Verification methods;
- d) Inspection procedures;
- e) Corrective action procedures;
- f) The methods used by the manufacturer to ensure that CSB produced conforms CES 139
- g) Needs procedure to ensure that non-conforming product is adequately managed,
- h) Dispatch with the associate records.

5. Specific requirement

5.1. Ingredient


The manufacturer shall establish and document procedures and appropriate test methods to ensure that the constituents of the CSB meet the requirements of CES 139 stated under clause 4.1 and 4.2 .
The quality manual shall describe the methods used by the manufacturer to ensure that the composition of the CSB produced and ingredient conforms to the relevant product specification standard, including appropriate test methods.

5.2. Handling, storage, packaging

The quality manual shall describe the precautions taken for the protection of the quality of the CSB while under the responsibility of the manufacturer. It shall include a description of the procedures used at CSB warehouse. Delivery documentation shall allow traceability to the products.
Handling storage and packaging of CSB shall be done in accordance with clause 5 and 6 of CES 139.

6. 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 listed in the CES 139 using the test methods specified in the standard.
The laboratories shall demonstrate the ability to provide results within a time and in a manner suitable for the manufacturer's factory production control.

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7. Tasks for certification body

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

7.1. Initial inspection of the factory and the factory production control

7.1.1. 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 information on the factory production control and the equipment to be used to produce the wheat flour.

The inspection shall, among other things:

- a) Verify that the quality manual complies with the requirements of quality management.
- b) Verify that the equipment used to produce and test CSB meets the criteria in this document.

7.1.2. Inspection an existing factory

In 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 quality management standard.


7.2. 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 CES 139. The following criteria shall be considered:

- a) The constituent as described in the CES 139 shall be protected against contamination within the factory.
- b) All Equipment shall be suitable for continuous mass production of CSB
 - c) Measures shall be taken to prevent the mixing of different ingredient and premixes.
- d) Each bag of CSB shall be stored in one or more separate warehouse, protected to prevent contamination and deterioration. The stores / warehouses/ may include or take the form of fully cleaned and managed. Warehouses or stores / discharge points shall be clearly marked with an indication of the CSB, batch number and any additional identification required.
- e) Points where CSB product is released from the factory and/or depot shall allow samples to be taken in accordance with the methods in ES ISO 24333.

7.3. Inspection, measuring and testing

The equipment used for measuring and testing shall be regularly checked and calibrated in accordance with the procedures and frequencies laid down in the operational manual. These procedures may include comparison of test results with other laboratories (external quality assurance). The test shall be conducted according to the test method specified in CES139.

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8. Surveillance, assessment and acceptance of the factory production

8.1. Inspection tasks

The inspection tasks include surveillance, assessment and acceptance of the factory production control operated by the manufacturer. Inspection shall include checking that any major change in the quality manual which is relevant to the factory production control of CSB has been reported to the certification body by the producer within one month of its implementation.

8.2. Frequency of inspections

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

8.3. Reports

Following each inspection, a confidential report shall be prepared and sent to the manufacturer.

The certification body shall consult, if appropriate; 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.

8.4. Evaluation

8.4.1. 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.

8.4.2. Frequency and time of evaluations

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

8.4.3. Control period


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

8.4.4. Evaluation of test results

Each evaluation shall be based on the test results obtained on samples of a given certified CSB, sampled according to ES PCP 010 during the control period.

8.5. Surveillances

CB shall conduct factory Surveillance audit 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.

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9. 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).

9.1. 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 test results which show not conforming to the single result limit value conformity criteria specified in CES 139 product specification, the manufacturer or supplier shall immediately determine the affected quantity, take appropriate action to prevent the dispatch of this quantity and inform the affected customer if such product has been released. In addition, the manufacturer shall immediately determine

10. 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.

11. Reports

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

12. Sampling and Testing

12.1. Sampling

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

12.2. Number of samples

The number of samples taken shall be done according to ES ISO 24333 - Cereals and cereal products - sampling. The first sample of CSB to be certified is used for initial type testing. The number of samples to be taken during the initial period shall be at least 2 per month.

12.3. Properties and test methods


The properties specified for testing in the clause entitled “Conformity criteria” in the relevant product specification standard shall be determined according to the test methods indicated in CES 139.

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

13. 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 three months. It is intended for use if:

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

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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 specification standard, using the test methods indicated in that standard.

14. Evaluation of test results

The results obtained shall be evaluated by the certification body.

15. 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.

16. Reports

Following any initial inspection, a confidential report shall be prepared and a copy sent to the producer.

17. Declaration of conformity

The declaration of conformity of CSB product 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.
- c) The standard designation of the CSB according to CES 139 (Labeling and marking shall be as specified in the product specification).
- d) Statements corn soya blend plus conforms to requirement of CES 139
- e) The evaluation of conformities described in this and other relevant certification scheme.
- f) The date of issue of the declaration and the certificate of factory production control.

18. conformity mark

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

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

The control of non-conforming corn soya blend product the corrective actions to be taken shall be full responsibility of the manufacturer which he /she shall document in accordance of the procedure in the quality manual.

20. Samples

The manufacturer shall determine its sampling and inspection points, and conduct testing as specified in Table 1. and 2 below.

Table 1: Super cereal – Corn Soya Blend plus formula

Sl. No.	Parameters	Acceptance Criteria	Method of Test	Frequency of test	Frequency of sampling and number of samples
1.	Maize				
2.	Whole soya beans				
3.	Vitamins /mineral FBF-V-13				
4.	Di-calcium phosphate Anhydrous				
5.	Potassium chloride				

Table 2: Physico-chemical Requirements of SC-CSBP

No.	Characteristics	Requirements	Method of Test	Frequency of test	Frequency of sampling and number of samples
1	Moisture, % by mass, max				
2	Energy (min KCal/100g)				
3	Protein (min, g/100gram)				
4	Fat (min, g/100gram)				
5	Crude fibre (max, g/100 gram)				
6	Total Ash (max, g/100 gram)				
7	Peroxide value (max, meq/Kg fat)				
8	A) Particle size passes through 1000 microns sieve (%)				
9	B) Particle size passes through 600 microns sieve (%)				
10	Calcium (mg/100gm)				
11	Potassium (mg/100gm)				
12	Vitamin-A (IU/100g)				
	Urease Index (max, pH unit)				


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Table 3: Microbiological requirement of SC - CSBP

Sl. No.	Parameters	Acceptance Criteria	Method of Test	Frequency of test	Frequency of sampling and number of samples
6.	Mesophilic aerobic Bacteria (cfu/g)				
7.	Coliforms (cfu/g)				
8.	Salmonella (cfu/25g)				
9.	Escherichia Coli (cfu/g)				
10.	Staphylococcus aureus (cfu/g)				
11.	Bacillus cereus (cfu/g)				
12.	Yeasts and moulds (cfu/g)				
13.					

Table 4: Maximum limit for heavy metals

Sl. No.	Parameters	Acceptance Criteria	Method of Test	Frequency of test	Frequency of sampling and number of samples
14.	Lead (max, mg/kg)				
15.	Cadmium (max, mg/kg)				

Table 5: Aflatoxin requirements

Sl. No.	Parameters	Acceptance Criteria	Method of Test	Frequency of test	Frequency of sampling and number of samples
16.	Total Aflatoxin - B1+B2+G1+G2 10.0 ES ISO 16050 (max, µg/kg)				
17.	Aflatoxin-B1 (max, µg/kg)				

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational Institutions, research institutes, government or organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

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International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

*More Information?
Contact us at the following address.*

The Head Office of ESA is at Addis Ababa.

. 011- 646 06 85, 011- 646 05 65

. 011-646 08 80

. 2310 Addis Ababa, Ethiopia

E-mail: info@ethiostandards.org

Website: www.ethiostandards.org



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