



Ceylon Cinnamon Geographical Indication Book for Processors and Traders

Volume 02



EDB
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Creating Markets, Creating Opportunities

CCGI Guidebook for Processors and Traders

Volume 2

Sri Lanka received its first ever Geographical Indication (GI) certificate when the European Union (EU) Commission granted GI status to Ceylon Cinnamon in February, 2022. The process was led by the Sri Lanka Export Development Board (EDB) with support from the EU-Sri Lanka Trade Related Assistance Project and through technical assistance from UNIDO, the WTO and other partners.

Having obtained GI status, it is critical to support the value chain and facilitate GI certified Ceylon Cinnamon exports. In this endeavor, the EDB has partnered with the IFC with support from the EU-ACIIS program, to implement a series of capacity building activities. This training manual is part of this effort. The Control Union was contracted by the EDB as part of this effort and provided inputs for developing this manual.

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	Control Point	Compliance Criteria	Additional Remarks
1	Registration		
1.1	Are Members of GI Association Registered with Association?	The association/Processor must keep a record of all registered Processor in details district wise; -Name, -Membership ID -Location and Acres of production area	

2	Reception of Raw Material		
2.1	Does the Processor on receipt of a product check the closing of the packaging or container?	Products received must only be in appropriate cleaned vehicles	Annexure I (Reception checklist format)
2.2	Do the results of the reception check explicitly mentioned in the documentary accounts?	The results of the reception check and crosscheck with records of those available in processor hand	In detail description record of received product should be maintained at processing premises (Quantity, Quality, Date, Proof of CCGI-Membership)
2.3	Are raw material storage areas managed in such a way that identification of the lots is ensured?	For the storage of raw material, areas must be managed to ensure identification of the lots.	

3	Infrastructure and Sanitation		
3.1	Are the basic infrastructure facilities provided for the operation	There must be basic facilities such as; (Basic access to the facility, Sound building structure, Electricity, Water)	The facility should be dedicated only for processing of cinnamon product
3.2	Do workers have access to clean toilets in the vicinity of their work place	Sanitation units shall be located where potential risk of contamination of the product is minimized and with facilities for hand washing.	
3.3	Does the processing center equipped with sufficient facilities to deal with personal hygiene	Toilet facilities, hand washing facilities(to be used after using the toilets and before starting the work), facilities to changing cloths	

4	Processing		
4.1	Are the facilities provided with adequate broadness and structure?	Consistent quality and safety of products by focusing attention people, premises, processes, products, and procedures (or paperwork).	
4.2	Are measurements taken during processing to avoid mixing with Non-GI Certified product or/and disallowed substance?	Measurements must be taken to avoid mixing with products that are not in conformity with the production rules stipulated in the CCGI-Specification.	Cleaning agents those used at any cleaning step shall be included under food grade substance
4.3	Does the processor satisfy the required qualifications/competencies?	The processor who has obtained a certificate from a recognized institutes	Recognized institutions ; 1. DEA 2. TVEC 3. CTI If there is no proof of certification, and Authorization by DEA officer is also accepted
4.4	Does the Processor keep equipment properly and adequately for processing	Tools and equipment used for processing are properly maintained, commonly used equipment when cinnamon processing ('Keththa' knife, 'Suruna Koketha', 'Sauththuwa' & 'Thalana kokeththa'), Brass rod or suitable machined for processing (Rubbing machine)	

Figure 1: Equipment used in cinnamon processing



Source:- (Cinnamon cultivation and processing, Volume 5, Export Agriculture Department 2015)

4.5	Does the Processor follow correct pre-Processing practices	Cleaning of the premises Cleaning of received cinnamon stems Removing of bark nodes for better peeling	
4.6	Does the Processor follow appropriate Processing methods and quilling practices	Scraping the outer bark out (Using 'Suruna Koketha' & 'Sauththuwa' knives) Rubbing the inner bark with a brass rod until the stem starts sweating Peeling off the inner bark (Using 'Thalana kokeththa') – Half cylindrical main portion of the inner bark and narrow strips of uneven pieces (quillings, featherings and chips) Shade drying of the bark for 30-45 min, Filling half cylindrical main portion of the inner bark (which is shade dried) with narrow strips of uneven pieces (quillings, featherings and chips) Finished quill stick shall have a length of 42 inches Air drying of quills for 24 hours Hand rolling of air-dried quills Air drying of hand rolled quills for another 6-10 days (Until the moisture content reach 15%) Packing of finished quills as bundles and dispatch (To collectors, retailers or directly exporters)	Pictogram of cinnamon stem washing to making cut quills is shown in the below diagram



Figure 2: Pictogram of cut quills processing

4.7	Does the processor follow adequate techniques when grading and sorting of Processed Cinnamon quills	Quills shall be cut as per the desired length of buyers using electric Cinnamon cutters, Once cut quills are bundled, they shall be packed and kept securely until dispatch	Table below is shown grading of cut quills
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Figure 3: Grading of cut quills

Group	Grade	Diameter of quills, mm , max	Extent of foxing, per cent, max.	Pictures	
Alba Continental	Alba	6	10		
	C5 (extra special)	8	10		
	C5 (special)	10	10		
	C5	12	15		
	C4	16	15		

	C3	18	20		
Mexican	M5 (special)	16	60		
	M5	18	60		
	M4	21	60		
Hamburg	H1	23	25		

	H2 (special)	25	40		
	H2	32	55		
	H3	38	65		

4.8	Does the processor have sufficient knowledge in making quills as per CCGI-Specification	Quills are produced out of the inner bark of mature cinnamon stems: the tree are harvested, and their outer bark is scrapped. Half pipes of inner bark are peeled and left to dry in the shade. By drying, those half pipes of inner bark curve. They are then joined together by overlaps (until they reach a length of 1070 mm or 535 mm and filled with quilling (uneven pieces of the inner bark that cannot be properly peeled as half pipes). This method of producing quills is unique to the identified geographical area of Sri Lanka. The cinnamon quills are graded on the diameter, color, number of quills per kilogram, and extent of foxing. Then cut quills are made by cutting quills into varying length below 1000mm	
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4.9	Does the processor use appropriate milling techniques in making Cinnamon powder	When making Cinnamon powder, quilling and chips are to be grounded by properly maintained grinding machines.	Quilling and chips of different qualities (Unscrapped or immature chips) shall not be mixed. Timely and spatial separation to be maintained
4.10	Does the processor have the sufficient knowledge in making of cinnamon powder as per CCGI specification?	Ceylon Cinnamon ground/powder has a golden yellowish (CC5) to dark brown color (CC10) the ground/powder cinnamon should be prepared exclusively from the barks.	
4.11	Does the Processor have the facilities provided with adequate broadness and structure when essential oil extraction?	Cinnamon leaf oil shall be obtained using proper steam distillation methods, Condensed distillate shall then be collected in a series of Florentine vessels This stage must last at least 5 hours in order to fully separate both medium (water and Oil) Density shall be checked after the process for verification	Leaves left on the field should not older than 5 days after harvesting. stainless steel used for reducing the corrosion
4.12	Does the processor have the sufficient knowledge in extraction leaf oil as per CCGI-Specification?	Oil color may vary from very pale yellow (CC1) to amber (CC7). Refractive index varies from 1.527 to 1.540 and specific gravity from 1.037 to 1.053. (Availability of specific gravity meter)	
4.13	Does the processor have the sufficient knowledge in extraction Bark oil as per CCGI-Specification?	Bark oil is extracted from distillation of cinnamon bark. Cinnamaldehyde content of this product varies between 30% to 70 % and its color from pale yellow (CC2) to amber (CC7) Refractive index varies from 1.555 to 1.580 and specific gravity from 1.010 to 1.03 (Availability of specific gravity meter)	Table below is shown Specification of Ceylon Cinnamon products (Cut Quills, Powder, Leaf oil, Bark Oil)
4.14	Does the processor ensure a hygienic working environment maintained	Maintenance of clean and hygienic environment at all related facilities (Raw material storage, Processing area, Finished goods storage, etc....	

Figure 4: Specification of Ceylon Cinnamon products

Category of products	Physical characters		Chemical characters	
Cut quills	Colour	CC4 to CC9	Volatile oils, ml/100 g, on dry basis min	1.0
	Texture	Semi smooth, not rough	Cinnamaldehyde content in volatile oil, ml/100 g, on dry basis	50.0- 70.0
	Flavour and smell	Smell and taste of the main volatile oil cinnamaldehyde. Mildly sweet Ceylon cinnamon flavour that sense hot burning feeling on the tongue	Eugenol content in volatile oil, ml/100 g, on dry basis	2.0-20.0
	Form	Cylindric, diameter varies according the grading	Total ash, per cent by mass, on dry basis (max.):	5.0
			Moisture content, per cent by mass (max.)	15.0
Powder	Colour	CC5 to CC10	Volatile oils, ml/100 g, on dry basis min	0.5
	Texture	Sticky when water is added but easy removable when dry. Highly hygroscopic		
	Flavor and smell	Mildly sweet Ceylon cinnamon flavour that sense hot burning feeling on the tongue	Eugenol content in volatile oil, ml/100 g, on dry basis	2.0 – 6.0
	Form	Small particles with a maximal diameter TBD		

Leaf oil	Color	CC1 to CC7	Eugenol content, per cent by mass	75.0 – 85.0
	Smell and flavour	Powerful, diffusive, warm, spicy and tenacious		
	Relative density at 28 °C	1.0340-1.0500		
	Refractive index at 28 °C	1.5250 – 1.5400	Cinnamic aldehyde content, per cent by mass	0.8 – 4.0
	Optical rotation at 28 °C, in degree	-2.5 to + 2.0		
Bark oil	Colour	CC2 to CC7	Cinnamic aldehyde content, per cent by mass	30 – 70
	Smell and flavour	Sweet and spicy		
	Relative density at 28 °C	1.0100 – 1.0300		
	Refractive index at 28 °C	1.5550 – 1.5800		
	Optical rotation at 28 °C, in degree	-2.5 to + 2.0	Eugenol content, per cent by mass	0.5 - 30

4.15	Does the processor use necessary measures to prevent pests	The processor or a handler of facility must use management practices to prevent pests.	Below Mentioned pest control methods, including but not limited, Removal of pest habitat, food sources, and breeding areas Prevention of access to handling facilities Management of environmental factors to prevent pest reproduction, such as temperature, light, humidity, atmosphere, and air circulation
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5	Residue analysis sampling		
5.1	Are there adequate results of analyses of samples on residues of sold products available?	Sample analysis reports of finished products Cinnamon quills, Cinnamon powder. Specially gas chromatography and mass spectrometry when 1000L of bark oil production is reached or every two year, (SO2 treatment is not allowed as post-harvest practices)	
5.2	Are the adequate representative samples taken?	Representative sample shall be kept proportionately for relevant batches or predetermined quantity. (500g for Cinnamon quills or Cinnamon powder, 50ml for Cinnamon bark oil or Cinnamon leaf oil)	

6	storage of finished product		
6.1	Are storage areas of GI-Certified products separated in space and/or time before and after production?	In case of preparation of Non-GI Certified products. For the storage of GI Certified products, areas must be separated by place or in time before and after the operation.	
6.2	Does the processor have adequate storage facility?	All Cinnamon products shall be packed and stored in clean and dry conditions which will protect the product from pests (insects, rodent and vermin), moisture and loss of volatile oils, Cut quills and Cinnamon powder packages shall be stored under the room temperature, dry and ventilated conditions (Moisture content to be maintained under 15%), Cut quills and Cinnamon powder package storage shall be built sound and lockable (Shall prevent intrusion of pests, diseases, contaminants & direct sun light), Cut quills and Cinnamon powder shall only be stored for 2-3 years	

7	Final Packaging		
7.1	Does the processor have adequate packaging means	Cut quills and Cinnamon powder shall be packed in jute/ paper/ cotton/ polythene bags, Food grade aluminum foil packs, or any other suitable food grade packs as per the buyer specifications, Cut quills and Cinnamon powder packages shall be sealed to avoid moisture absorption	
7.2	Does the processor have appropriate condition to store finished product of cinnamon (Quills, Quilling, Powder, Leaf oil and Bark Oil)	Cinnamon bark oil and leaf oil shall be packed in air-tight and amber-colored glass or epoxy coated metal (Aluminum or Stainless Steel) containers or any other suitable food grade container as per the buyer specifications (Container material shall not alter the product and must protect it from direct sun light), Cinnamon bark oil and leaf oil shall only be stored for 2 years.	N/A

8	Labeling and other indications		
8.1	Is the use of the CCGI logo and other indications on labels according to the CCGI-Specification	All the packs shall depict GI national logo and shall be of a size which is in proportion to the front surface of the package (5-10%) 'GI Ceylon Cinnamon' logo shall correctly depict in original form as given in the 'GI Ceylon Cinnamon' registration 'GI Ceylon Cinnamon' logo shall be of a size which is in proportion to the front surface of the package (5-10%) The 'GI Ceylon Cinnamon' logo shall be clearly visible on the relevant package All packages shall carry the 'GI Ceylon cinnamon' registration number given by the GI Association 'GI Ceylon Cinnamon' registration number shall be in printed form and not be in sticker form	Annexure II (CCGI-Labeling guideline)

9	Administration		
9.1	Are stock and financial records kept in the unit or premises?	Stock and routine activity records shall be maintained at Processing facility	Annexure III (Example format for (Processing record, cleaning records, Pest control records, Dispatch record)
9.2	Does accounts demonstrate the consistent balance between the input and the output.	Document receipts & financial records shall be kept of relevant transfers/ transportations (indicating basic details – Amount, Field/ Farmer/ Processor reference, etc.), There shall be a record keeping system to track finished products back to their origin	All relevant information must be checked and refer them as evidence Date of incoming and outgoing products with quantity and origin/destination must be checked. Overview (total quantity per product) of the product movements since last inspection must be recorded
9.3	Does the client have sufficient complaint procedure, complaint form and records of all received complaints about the certified production and the related appropriate remedial actions?	There shall be a documented Customer complain handling procedure and a record	Annexure IV (Complaint handling procedure and recording format)