



**AMTEC**  
**Agricultural Machinery Testing and Evaluation Center**  
**1977**

**ACR 023:2023 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR COFFEE ROASTER**

**■ Application for AMTEC Test**

The test applicant shall submit AMTEC-OP-F01 (Agricultural Machinery Test Application Form) together with the following requirements:

- AMTEC-OP-F16 (Waiver for Machine Specifications)
- AMTEC-OP-F18 (Data Privacy Consent Form)

**■ Technical Specifications of the Machine**

The test applicant shall submit any document/s indicating the specifications of the machine upon application for testing. In case the said document/s are not available, the applicant shall fill out the Machine Specifications Sheet provided by AMTEC upon request.

- Operator's manual with complete specifications as indicated in Annex B of PNS/BAFS/PAES 215:2017
- Brochure
- Machine specifications sheet

**■ Preparation and Operation of the Machine**

The coffee roaster shall be ready for testing. The officially designated operator of the test applicant shall operate, demonstrate, adjust, and repair the machine. Meanwhile, the officially designated representative shall decide on matters related to the operation of the machine.

**■ Running-in of the Machine**

A test run shall be conducted prior the official test as to check its condition and make necessary adjustments to the machine.

**■ Test Material**

The test applicant shall prepare dried green coffee bean samples that are sufficient for the running-in of the machine and initial laboratory sampling, in addition to the actual conduct of test, comprising of three (3) test trials. Specifically, the amount of test material shall be sufficient for at least 15 minutes of operation per test trial. They should be prepared according to the following characteristics:

- Shall have identical characteristics in terms of moisture content and variety;
- Commonly/locally grown coffee variety; and
- Shall have 9-12% moisture content (wet basis).

**■ Other Test Necessities**

The following shall also be adequately supplied during the conduct of testing:

- Fuel sufficient for the entire duration of test trials;
- Extension plugs (if needed);
- Spare Liquefied Petroleum Gas (LPG) tanks in case it runs out during the test; and
- Tools for machine repair and adjustments.

**■ Machine Setting**

The coffee roaster shall be tested at the manufacturer's recommended setting for the following:

- Prime mover, rpm: \_\_\_\_\_
- Roasting temperature, °C: \_\_\_\_\_
- Drum rotational speed, rpm: \_\_\_\_\_
- Airflow rate, m<sup>2</sup>/s: \_\_\_\_\_



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■ Performance and/or Fabrication Test Requirements	
AMTEC shall conduct various tests and verification on different performance parameters of the machine including the following requirements as per PNS/PAES 214:2017:	
■ Fabrication Requirements	
Criteria	Requirement as per PNS/PAES 214:2017
General Requirements	<input type="checkbox"/> Steel bars, metal sheet/plate, and mild steel shall be generally used for the manufacture of the different components of the roaster. <input type="checkbox"/> Parts in direct contact to the coffee beans shall be made of corrosion-resistant and food grade materials in compliance to food safety standards. <input type="checkbox"/> It shall be provided with appropriate temperature gauge, cooling tray with stirrer, and inspection window. <input type="checkbox"/> It shall use either Liquefied Petroleum Gas (LPG), electricity, or diesel for heat generation.
Cooling Tray	<input type="checkbox"/> It shall have a capacity according to the capacity of the drum roaster.
Drum Roaster	<input type="checkbox"/> It shall have a trier provided.
Diesel-powered Roaster	<input type="checkbox"/> A heat exchanger shall be provided for this type of roaster.
Frame and Stand	<input type="checkbox"/> It shall be able to support the whole coffee roaster assembly during operation.
Others	<input type="checkbox"/> It shall have a mechanism for adjustment of heat. <input type="checkbox"/> It shall have a mechanism of adjustment of airflow and drum speed, as applicable. <input type="checkbox"/> Bolts and nuts, screws, bearings, bushing and seals shall conform to food safety requirements, PAES or other international standards.
■ Performance Requirements	
Criteria	Requirement as per PNS/PAES 214:2017
Roasting capacity, kg/h	As per manufacturer's specifications
Roasting recovery, %, minimum	80
Broken beans, %, maximum	1
Noise level, maximum, dB(A)	92 (6-hour operation)
■ Safety, Workmanship, and Finish	
Criteria	Requirement as per PNS/PAES 214:2017
General Requirements	<input type="checkbox"/> Shall be free from any manufacturing defects that may be detrimental to its operation. <input type="checkbox"/> All metal surfaces shall be free from rust. <input type="checkbox"/> External parts shall be free from sharp edges and rough surfaces. <input type="checkbox"/> It shall have a mechanism for immediate load disengagement of power or emergency stop. <input type="checkbox"/> All moving parts shall be provided with safety features. <input type="checkbox"/> The roaster shall be compliant with the Good Manufacturing Practices (GMP).



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**■ Suspension and Termination of Test**

If the test material does not conform with the recommended quantity and characteristics, AMTEC shall not proceed with the test. Should the test applicant request the conduct of the test despite the non-conformity to the test requirements identified by AMTEC, the applicant shall sign the AMTEC Waiver for Nonconformity to Test Requirements.

- AMTEC-OP-F24 (Waiver for Nonconformity to Test Requirements)

On the other hand, if the machine stops due to breakdown or malfunction during the test run affecting the machine's performance, the test may be suspended. If the machine cannot continue the operation, the test shall be consequently terminated.

**■ Other Assistance During Test**

1. For field and laboratory testing outside the AMTEC premises, the applicant shall shoulder the transportation expenses (i.e. fuel, toll fees, vehicle rental, plane fare, sea fare, etc.) of the AMTEC Staff assigned for the testing activity.
2. The applicant may assist the AMTEC Staff in looking and/or making arrangements for hotel accommodation near the test site.
3. The applicant shall provide drinking water to the AMTEC Staff during the testing activity.
4. The applicant shall provide any form of shed or sunshade (e.g. tent, umbrella, etc.) for the test equipment, samples (if applicable) and AMTEC Staff during the testing activity in the field.
5. The applicant is requested to assist the AMTEC Staff in finding any means to access a safe and convenient restroom near the test site during the testing activity.

**■ Testing Fee**

1. The testing fee for coffee roaster is PhP 9,500.
2. To proceed through AMTEC test, the test applicant shall settle at least 50 % of the testing fee which is non-refundable but transferrable.
3. In cases of additional testing during the field, the test applicant shall immediately pass the required documents and settle at least 50% of the testing fee within 5 working days after the testing proper.  
 Additional testing, number of machines: \_\_\_\_\_
4. Payment/s shall be directed to the following:  
 Through UPLB Cashier's Office (8AM to 12PM): AMTEC Trust Fund Code No. 8271632-40A2040101000  
 Through Landbank (8:30AM to 3PM): UPLB Trust Fund Account No. 1892100507 or UPLB FI Account No. 1892-1003-29

**■ Other Reminders**

1. All manufacturers, fabricators, assemblers, and importers (MFAI) shall secure a Certificate of Conformity (CC) from the Bureau of Agricultural and Fisheries Engineering (BAFE) which guarantees that their agricultural and fisheries machinery conforms with PNS/BAFS PABES or other relevant standards identified by BAFE. More information about the application for CC can be found at <http://bafe.da.gov.ph/index.php/certificate-of-conformity-of-manufacturers-fabricators-assemblers-distributors-dealers-importers-and-exporters/>.
2. All MFAI shall employ an Agricultural and Biosystems Engineer (ABE), as mandated by RA 10915 (ABE Law), who shall facilitate all activities and concerns pertinent to AMTEC testing and BAFE requirements.  
Do you currently have an ABE in your roster of employees?  Yes  No