



AMTEC
Agricultural Machinery Testing and Evaluation Center
1977

ACR 029:2023 CHECKLIST AND REMINDERS FOR THE AMTEC TEST CONDITIONS AND REQUIREMENTS FOR CACAO 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 256:2018
- Brochure
- Machine specifications sheet (shall be filled out upon request and receipt of copy from AMTEC in case the manual or brochure is not available)

■ Preparation and Operation of the Machine

The cacao 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 cacao beans which are sufficient for the three (3) test trials, laboratory samples, and running-in. They should be:

- From commonly or locally grown cacao
- Dried and fermented with 6-8% moisture content wet-basis; and
- Has bean count of less than 120

■ Other Test Necessities

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

- Liquefied Petroleum Gas (LPG) (if applicable);
- Extension plugs for electric motor-powered roaster (if needed); and
- Raw/Biomass material for biomass-powered roaster (if needed).

■ Machine Setting

The cacao roaster shall be tested using the manufacturer's recommended setting for the following:

- Power requirement (Power meter, weight difference for LPG, total weight used for biomass): _____
- Rotational speed (drum-type), rpm: _____
- Temperature setting, °C: _____



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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 255:2018:

■ Fabrication Requirements

Criteria	Requirement as per PNS/PAES 256:2018
General Requirements	<input type="checkbox"/> Steel bars, metal sheet or plate, and mild steel shall be generally used for its manufacture. <input type="checkbox"/> Parts in direct contact with the beans shall be made of corrosion-resistant and food grade materials in compliance to the food safety standards. <input type="checkbox"/> Frame and stand shall be able to support the whole assembly during operation.
Mechanism for Adjustment	<input type="checkbox"/> All cacao roaster shall have a mechanism for adjustment of the temperature, timer and thermostat. <input type="checkbox"/> Drum type roasters shall have mechanism for the adjustment of the rotational speed.
Cooling trays and dasher	<input type="checkbox"/> Shall be provided.
Others	<input type="checkbox"/> There shall be provision for sampling point in the middle of the roasting chamber for checking purposes within the roasting process. <input type="checkbox"/> Bolts and nuts, screws, bearings, bushing and seals to be used shall conform to the food safety requirements, PAES or other international standards.

■ Performance Requirements

Criteria	Requirement as per PNS/PAES 256:2018
Roasting capacity, kg/h	As per manufacturer's specifications
Roasting efficiency, minimum, %	95
Roasting temperature, minimum, °C	120

■ Safety, Workmanship, and Finish

- The noise level should conform with the provisions given in Annex A.
- There shall be earmuffs or other ear protective devices provided for the operators to use when 95 db(A) is exceeded during operation.
- Cacao roaster shall be free from any manufacturing defects that may be detrimental to its operation.
- All metal surfaces shall be free from rust.
- All moving parts shall be provided with cover or guard.
- The cacao roaster shall be free from sharp edges and surfaces that may injure the operator. Warning notices shall be provided in accordance with PAES 101:2000.
- The cacao roaster shall be compliant with the Good Manufacturing Practices (GMP).

■ 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.



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■ 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 cacao 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