Certified Reference Material
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Certificate of Analysis

AOCS 1012-A, non-modified cotton

Certified Presence	Certified Value (g/kg)	Measurement Uncertainty	Test Method
COT102 cotton absent	< 1* g/kg Adventitious Presence	With 95%* confidence, the true mass fraction of Adventitious Presence is below 1* g/kg	Real-time PCR

Description: This is the first batch of non-modified cotton CRM prepared by AOCS for Syngenta Crop Protection, LLC. *Certified Value and Measurement Uncertainty information is provided by Syngenta Crop Protection, LLC. This material is for limited purposes only: see "Intended Use" and “Terms and Conditions.”

This certificate is valid through: July 2021

This validity date may be extended when further evidence of stability becomes available. Customers will be notified by AOCS if a stability issue arises at AOCS Headquarters.

Introduced: 4 November 2015

Revised: 24 July 2016, 19 July 2018, 20 June 2019, 31 October 2019, 13 July 2020

Technical Services Manager Denise Williams	Chief Executive Officer Patrick J. Donnelly

AOCS Mission: AOCS advances the science and technology of oils, fats, proteins, surfactants and related materials, enriching the lives of people everywhere.

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Characterization

Product Description AOCS 1012-A has been prepared by AOCS from cotton devitalized seed. AOCS 1012-A is available in 27-mL glass headspace vials containing approximately 10 g of material. Users are informed that this reference material has been produced from devitalized seed of non-modified cotton (Breeding line: Coker 312) delivered by Syngenta Crop Protection, LLC.

Homogeneity A total of twenty samples, 10 g each, were tested using event-specific qualitative and quantitative real-time PCR methods developed and validated by Syngenta Crop Protection, LLC. Test results received from Eurofins-GeneScan, New Orleans, LA (an ISO 17025 accredited laboratory) for qualitative and quantitative, event-specific real-time PCR analysis were all consistent with the reported absence of COT102 trait.

Stability AOCS Certified Reference Materials are tested for stability on an annual basis and certificates may be extended based on the outcome of this testing. Customers may request extended certificates, but they are informed that results are based on samples that are obtained from AOCS' inventory. AOCS cannot guarantee the integrity of samples outside of AOCS control.

Analytical Method Used for Certification

Syngenta Crop Protection, LLC, RTP, NC, performed real-time PCR in a total of 3000 seeds (30 pools of 100 seeds/pool) to determine the presence of genetically modified (GM) impurities (also known as Adventitious Presence) in the non-genetically modified material used for the production of this CRM. All pools tested negative for GM impurities. Adventitious Presence was then based on the upper bound of true % purity using a 95% confidence level and was calculated using SeedCalc8 (Remund *et al*. 2018).

Eurofins-GeneScan, New Orleans, LA (an ISO 17025 accredited laboratory) performed event-specific real-time PCR for non-modified to validate the absence of the COT102 traits and determine the homogeneity of this CRM.

Warnings and Precautions

This product is for laboratory use only and is not for consumption. The user of this CRM should follow safety requirements and rules issued by voluntary organizations and government agencies expert in the field of laboratory safety.

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Intended Use

This CRM, AOCS 1012-A, is intended for use as quality control material or calibrant in methods for the detection, identification, and/or quantification of biotechnology-derived events.

Instructions for Use

Upon receipt the product should be stored in a sealed container in the dark and at ambient or cooler conditions. The product may have settled during shipment, therefore, thoroughly mix the CRM before use to ensure homogeneity.

If the user of this CRM intends to use it multiple times, proper protocols must be followed to ensure that the sample retains its integrity. Use a clean laboratory spatula to remove the intended sample amount. After the sample has been removed, flush the headspace of the vial with nitrogen gas, then replace the rubber stopper. Place a new 20 mm tear-off aluminum unlined seal on top of the rubber stopper and crimp it to the vial by using a crimping tool. Store the CRM in the dark and at ambient or cooler conditions and repeat this process for all subsequent uses.

Recommended test portion: minimum of 1 g

Protocols have been followed to ensure that this CRM is absent of the trait it has been tested against. Please follow all instructions on this certificate to prevent contamination and be sure to store the CRM under the proper conditions.

Note: The AOCS 1012-A certification report is available online and a paper copy could be supplied upon request.

References

Remund K, Simpson R, Laffont J-L, Wright D, and Gregoire S. Seedcalc8. 2008. (https://www.seedtest.org/en/statistical-tools-for-seed-testing-_content---1--3449--1102.html)

Terms and Conditions (i– ix)

i. The CRM AOCS 1012-A shall be used solely 1) in assays for (a) detecting the absence of COT102, or (b) quantification of COT102; or 2) for determining whether an assay cross-reacts with CRM AOCS 1012-A. CRM AOCS 1012-A shall be used for no other purpose. Specifically, the CRM may not be used to develop a detection method for non-modified nor trait(s) present therein. No other rights are conveyed by the sale of the CRM 1012-A to any purchaser, including any rights to any pending or granted Syngenta Crop Protection, LLC patents or other Syngenta Crop Protection, LLC intellectual property that may

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protect the CRM or non-modified or trait(s) present therein or a detection method for non-modified powder.

ii. Neither the CRM AOCS 1012-A nor any extract or portion thereof shall be resold or redistributed by any purchaser, unless the resale or redistribution is required by national law in force in the purchaser's country.

iii. Neither the CRM AOCS 1012-A, nor any extract or portion thereof, shall be used for human or animal consumption or human or animal trials.

iv. Neither the CRM AOCS 1012-A nor non-modified DNA, nor any part of either of these, shall be used for transformation or breeding.

v. No characterization or derivation of COT102, of the trait or traits present in CRM AOCS 1012-A, or of the CRM AOCS 1012-A shall be performed, except as allowed for in section (i).

vi. All assay activities undertaken using the CRM AOCS 1012-A shall be conducted in strict compliance with all applicable laws governing such activities, and shall comply with conditions of all permits and authorizations which may be required for such activities; and such activities shall be strictly limited to assays in contained facilities, for example, laboratories.

vii. Prior to disposal of any used or excess CRM AOCS 1012-A or residues thereof, such material or residue must be treated in a manner that degrades the CRM material, such as by autoclaving.

viii. CRM AOCS 1012-A shall not be exported nor re-exported in violation of any applicable laws or without securing any necessary export or import clearances or permits.

ix. THE CRM 1012-A IS PROVIDED FOR THE PURPOSE OF IDENTIFYING, DETECTING AND QUANTIFYING COT102 AND FOR NO OTHER PURPOSE. AOCS HAS TESTED CRM 1012-A WITHIN THE PAST 12 MONTHS AND STATES THAT IT HAS DETERMINED IT TO BE OF SUFFICIENT QUALITY AND FIT FOR THE PURPOSES STATED HEREIN. NO Syngenta Crop Protection, LLC WARRANTY IS PROVIDED WHETHER EXPRESS OR IMPLIED, IN RELATION TO THE CRM AOCS 1012-A AND Syngenta Crop Protection, LLC MATERIALS. Syngenta Crop Protection, LLC MAKES NO REPRESENTATION OR WARRANTY THAT THE USE OF THE CRM AOCS 1012-A, WHETHER BEFORE, OR AFTER THE EFFECTIVE DATE OF THE APPLICABLE CERTIFICATE, WILL NOT INFRINGE ANY PATENT OR OTHER PROPERTY RIGHT.

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