



# CORESTA Agrochemicals Analysis Sub-Group

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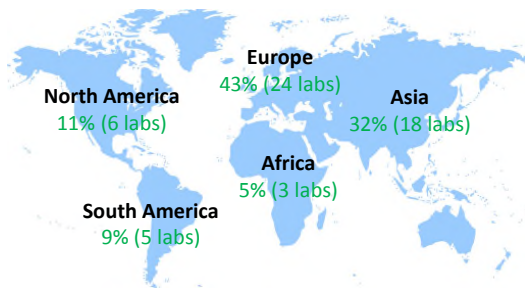
## INTRODUCTION

CORESTA is an association founded in 1956 to promote international cooperation in scientific research relative to tobacco and its derived products. CORESTA established the Agrochemicals Analysis Sub-Group (AA-SG) in 1972 to improve methods for the analysis of the most used Crop Protection Agents (CPAs) in tobacco production. The group's objectives are 1) To perform regular proficiency testing of Multi-Residue Methods for the analysis of agrochemical residues on tobacco, 2) To undertake joint experiments to resolve unanswered questions arising from proficiency testing, and to expand the knowledge base on agrochemical residues and their analysis, 3) To produce and maintain a series of Technical Notes on different agrochemical residue classes and selected individual compounds to supplement the Technical Guideline and aid method development and improvement.

## PROFICIENCY TESTING with FAPAS

Since 2005, the CORESTA AA-SG conducted annual proficiency tests in collaboration with Fapas® (Food Analysis Performance Assessment Scheme) from Fera Science Ltd. (Fera) in the UK.

This collaboration has facilitated the realisation of the only official proficiency testing conducted on the tobacco matrix. 56 laboratories from 27 countries participated in CORESTA-Fapas proficiency testing contributing to consistent performance improvements by the participating laboratories. Around 25 laboratories have taken part in each of the last 5 rounds.



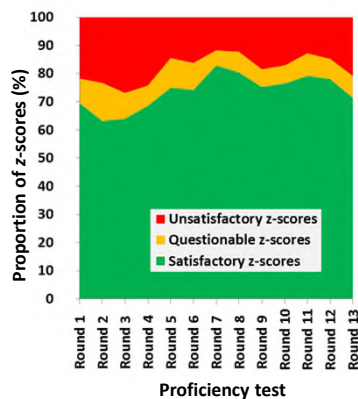
The laboratory performance assessment has allowed the tobacco industry to work with internal and commercial laboratories worldwide ensuring reliable and timely results and able to cover an extremely large testing scope, including all CPAs listed in the CORESTA Guide No. 1\* Guidance Residue Levels (GRLs) and other CPAs which are part of a company's internal standards and regulatory compliance requirements.

The participating laboratories' performances are evaluated based on z-score, which can be interpreted as:

- $|z| \leq 2$  : satisfactory
- $2 < |z| \leq 3$  : questionable
- $|z| > 3$  : unsatisfactory

The rate of satisfactory z-scores for all participants has been fluctuating from a minimum of 63% to a maximum of 83% and is stable over 70% in the last 9 rounds.

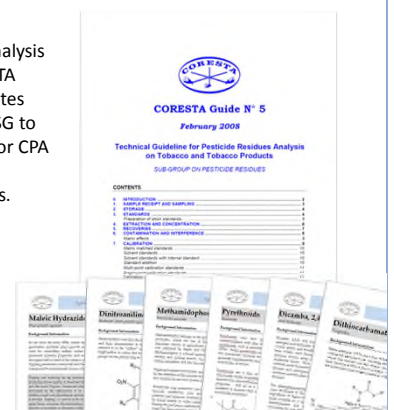
To resolve questions arising from each round of proficiency testing, the CORESTA AA-SG holds an annual discussion which expands knowledge based on these CPA residues analysis in tobacco so that laboratories' performances can be improved.



## TECHNICAL DOCUMENTS

A Technical Guide for Pesticide Residue Analysis on Tobacco and Tobacco Products (CORESTA Guide No. 5\*) and numerous Technical Notes have been produced by the CORESTA AA-SG to provide laboratories with the know-how for CPA residue analysis on tobacco, with specific information on the analysis of certain CPAs.

- ✓ TN001-GN5-2014 Maleic Hydrizide
- ✓ TN002-GN5-2014 Dinitroanilines
- ✓ TN003-GN5-2014 Methamidophos
- ✓ TN004-GN5-2014 Pyrethroids
- ✓ TN005-GN5-2014 Acid Herbicides
- ✓ TN006-GN5-2017 Dithiocarbamates

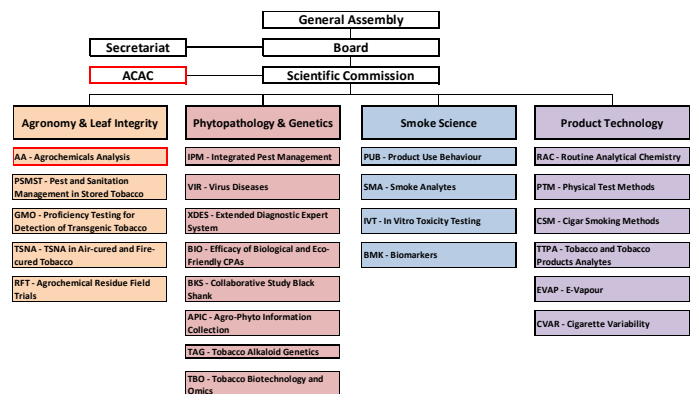


## About CORESTA

The name of "CORESTA" is derived from the French version of its full title (Cooperation Centre for Scientific Research Relative to Tobacco), a name that reflects the founding purpose of the association, notably to respond and where practicable resolve the non-competitive issues associated with tobacco production and product manufacture, control and use.

There are four Study Groups which are Agronomy & Leaf Integrity, Phyto-pathology & Genetics, Smoke Science and Product Technology.

The Agrochemical Analysis Sub-Group belongs to the Agronomy & Leaf Integrity Study Group and works closely with the Agrochemical Advisory Committee (ACAC).



## JOINT EXPERIMENT TEST STUDIES

Organization of the CORESTA-Fapas proficiency testings also permits the identification of issues with either Multi-Residue Method or Single-Residue Method analysis of specific CPAs and for which dedicated Joint Experiment Test Studies (JETS) are conducted among laboratories.

- Recent JETS:
  - ✓ JETS 10/1 Cyfluthrin
  - ✓ JETS 12/1 Endosulfans
  - ✓ JETS 16/1 Dithiocarbamates
  - ✓ JETS 16/2 Maleic Hydrizide
  - ✓ JETS 17/1 Maleic Hydrizide

## TOBACCO LABORATORY COOPERATION

CORESTA, through its AA-SG, provides a service to the tobacco industry with the evaluation of laboratory performance. It consequently offers the tobacco industry the possibility to work with many laboratories worldwide and to have confidence in their results.

## ACKNOWLEDGMENT

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References: CORESTA, Guide No. 1: The Concept and Implementation of Agrochemical Guidance Residue Levels, July 2016, [https://www.coresta.org/sites/default/files/technical\\_documents/main/Guide-No01-GRLs4th-Issue-July16.pdf](https://www.coresta.org/sites/default/files/technical_documents/main/Guide-No01-GRLs4th-Issue-July16.pdf)  
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