



Fera Science Ltd (Fera)

## Protocol for Proficiency Testing Schemes

Version 5, April 2017

Part 2 – Fapas<sup>®</sup> Food Chemistry scheme (FAPAS)

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## **PREFACE**

This Protocol is a series of inter-related documents. This document, Part 2, sets out specific details for the Fapas<sup>®</sup> Food Chemistry scheme (FAPAS). Although this document duplicates some of the text in Part 1 – Common Principles, it cannot be used in isolation. Part 2 must always be read in conjunction with Part 1 and vice versa.

## **VERSION HISTORY**

This Protocol was completely revised in 2009, superseding all proficiency testing scheme Protocols previously published by Fera in any of its incarnations.

Version 5 of April 2017, this version, supersedes Version 4 of September 2016. The changes are as follows;

Update organisation nomenclature throughout

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## **1. INTRODUCTION**

### **1.1. Fera, PTG and Fapas®**

Fera was vested on 1 April 2015. Fera provides a wide range of proficiency testing (PT) schemes under the brand name of Fapas®. The management of these PT schemes is the sole task of one team within Fera, known internally as the Proficiency Testing Group (PTG).

For the purpose of this Protocol we use Fapas® to mean Fera PTG. Part 2 of this Protocol, i.e. this document, specifies details relating only to the Fapas® Food Chemistry scheme (FAPAS).

### **1.2. Accreditation**

Fera is a UKAS accredited Proficiency Testing Provider, No. 0009. Accreditation is conferred upon Fapas® Food Chemistry Scheme (FAPAS) in accordance with ISO/IEC 17043:2010 [1].

The formal schedule of the accreditation can be obtained from the United Kingdom Accreditation Service (UKAS) web site (Adobe PDF format) [2].

Unless otherwise specified in the detailed programme or brochure, all Fapas® Food Chemistry Scheme (FAPAS) PTs can be considered to be within scope of accreditation. Details of the PTs and scope can be inferred from the published brochure and schedule of accreditation.

## **2. ORGANISATION OF FOOD CHEMISTRY SCHEME (FAPAS)**

### **2.1. Management System**

The accredited management system covers all aspects of the PTs organised by Fapas® Food Chemistry scheme (FAPAS), i.e. the same system applies whether a particular PT is within scope of accreditation or not.

## **3. PARTICIPATION IN SCHEMES**

### **3.1. Test Material Preparation and Homogeneity**

Test materials are prepared for Fapas® by subcontracting laboratories. The homogeneity and stability testing may be done by the same laboratory or a different subcontracting laboratory. Details of test material preparation and homogeneity results are retained by Fapas® but no longer published in the reports. Homogeneity testing procedures and evaluation of the results are in keeping with those recommended in the International Harmonized Protocol [3]. The identity of the subcontracting laboratories is confidential.

Participants may contact Fapas® to request details of test material preparation and homogeneity testing, where it is pertinent to their assessment. Such details may be released on request, except where this compromises data which is commercial in confidence or where such knowledge is scientifically invalid in the interpretation of assessments.

### **3.2. Dispatch and Receipt of Test Materials**

Fapas® Food Chemistry scheme (FAPAS) test materials may be sent either by normal post or by courier where time limitations are imposed. Such time limitations usually arise when an analyte/matrix combination is temperature sensitive or stable for only a limited period of time. Such test materials are indicated on the programme of PTs. To facilitate speedy delivery of samples, participants should make use of on-line tracking services. It is the responsibility of the customer to

anticipate an email on the day of dispatch advising them of the tracking number and then to monitor the progress of their samples. It is particularly important for non-UK participants to track their samples to ensure a smooth transit through their country's Customs. Fapas<sup>®</sup> cannot be held responsible for delays arising at Customs.

### **3.3. Analysis of Test Materials**

It is the responsibility of participants to read the instructions (provided electronically, downloaded from the Fapas<sup>®</sup> website, [www.fapas.com](http://www.fapas.com)) and to follow them exactly, prior to conducting the actual analysis of the test material. Fapas<sup>®</sup> cannot be held responsible for any problems arising from failure to comply with these instructions.

Examples of instructions are available on request from Fapas<sup>®</sup>.

### **3.4. Follow-Up Services**

After a PT has been completed and values for analyte concentrations assigned, surplus PT materials may be available to purchase for use as quality control (QC) materials or reference materials (RM). These materials are not Certified Reference Materials (CRM). Certified Reference Materials for the food analysis sector, however, are not numerous and surplus Fapas<sup>®</sup> test materials may be the only source of a suitable quality control material.

A list of surplus test materials (both QC and RM) that can be purchased is available from the website, [www.fapas.com](http://www.fapas.com).

Most reports issued since the launch of Fapas<sup>®</sup> in 1990 are available for purchase, and prices are available on request. Participants in all of the Fapas<sup>®</sup> schemes have free access to an electronic copy of reports for those tests for which they have registered. Electronic copies of reports are available on request and a charge will be made for these.

If a participant wishes to obtain advice on any aspect of their performance, they should contact Fapas<sup>®</sup> by email ([info@fapas.com](mailto:info@fapas.com)) in the first instance. Participants must note that Fapas<sup>®</sup> may offer assistance in the form of a broker service whereby Fapas<sup>®</sup> will either anonymously or, subsequent to all parties agreeing to waive their confidentiality, pass on the participant's inquiry to an expert laboratory/external advisor.

## **4. PERFORMANCE ASSESSMENT**

All Fapas<sup>®</sup> Food Chemistry scheme (FAPAS) PTs express participants' quantitative results as z-scores. Exhaustive details of the derivation of the assigned value are not included in Reports. Unless otherwise detailed in Reports, participants may assume that a full assessment of the assigned value by robust mean, median or mode has been carried out. The standard deviations for proficiency assessment may be derived either from the modified Horwitz equation [4], collaborative trial data, regulation, or a fitness-for-purpose  $RSD_R$  provided by expert opinion. Relevant references will be detailed in Reports. For some tests (e.g. pesticides, vet drugs), if a participant fails to report an analyte and their limit of determination (or limit of quantification or  $CC\beta$ ) is less than the level required to obtain a z-score of -3, the result will automatically be assigned to zero.

Qualitative results may be assessed either against the answer anticipated by formulation or against the majority consensus of participants' results. Where results are assessed against the formulation, they are expressed as either "satisfactory" or "not satisfactory". Where results are assessed against the consensus, they are expressed as either "agree" or "disagree" with the consensus. For some tests (e.g. pesticides or colours), there will be an additional table in the report detailing analytes found by participants that were not part of the test (i.e., false positives).

## 5. REFERENCES

- 1 ISO/IEC 17043:2010, Conformity assessment – General requirements for proficiency testing.
- 2 <http://www.ukas.com>, accessed 17/03/2017
- 3 Thompson, M., Ellison, S.L.R. and Wood, R., 2006, The International Harmonised Protocol for the Proficiency Testing of Analytical Chemistry Laboratories, *Pure Appl. Chem.*, **78** (1), 145–196.
- 4 Thompson, M., 2000, Recent trends in inter-laboratory precision at ppb and sub-ppb concentrations in relation to fitness for purpose criteria in proficiency testing, *Analyst*, **125**, 385-386.

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