TESTQUAL
PROFICIENCY TESTING SCHEMES

TestQual, S.L.

(Proficiency Testing Schemes)

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ENAC
ISO 17043
Nº9 / PPI014

The parameters marked (*) are not accredited

FINAL REPORT TestQual 194

Multi-analysis:

Fosetyl, phosphonic acid (*), Glyphosate, AMPA (*), Multiresidues pesticides in Kiwi

LABORATORY CODE:	Login into your client area on www.testqual.com, request participation certificate or individual report
ISSUE DATE OF THE REPORT:	2024/08/02

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Fecha: 2024.08.02 12:30:09 +02'00'

0. GLOSARY AND ABREVIATIONS

Text	Abbreviation
TestQual	TQ
Proficiency test	PT / P.T.
Limit Of Quantification	LOQ
NA	Not Analysed
Decimal separator	,
$_t$RSD	Target Relative Standard Deviation
Consensus	Consens.
Formulation/Characterization	Formu.
Fosetyl-Al (Sum of fosetyl and phosphonic acid and its salts expressed as fosetyl)	Fosetyl-Al (sum)

SUMMARY

The samples from this proficiency test were sent on May of 2024 to ***20*** participant laboratories and 19 sent their results.

Summary TestQual 194- Kiwi results:

ANALYTE	ACCREDITED?	ASSIGNED VALUE ORIGIN	EVALUATON OF THE ASSIGNED VALUE	NUMBER OF DATA*	ASSINGED VALUE (µg/Kg)	UNCERTAINTY (µg/Kg)	%$_t$RSD	TARGET STANDARD DEVIATION (µg/Kg)	ROBUST STANDARD DEVIATION (µg/Kg)
'Phosphonic acid' (*)	No	Consens.	OK	15	270,63	21,49	25	67,66	83,22
'Fosetyl'	Yes	Consens.	OK	11	114,38	6,43	25	28,59	21,32
'Fosetly-Al (Sum)'	Yes	Consens.	-	15	492,27	33,22	25	123,07	128,64
'Glyphosate'	Yes	Consens.	OK	15	213,68	15,95	25	53,42	61,79
'AMPA' (*)	No	-	-	-	-	-	25	-	-
'Boscalide'	Yes	Consens.	OK	13	193,05	17,02	25	48,26	61,37
'Cyproconazole'	Yes	Consens.	OK	15	114,29	5,92	25	28,57	22,92
'Fludioxonil'	Yes	Consens.	OK**	15	138,14	9,06	25	34,54	35,07
'Pyriproxifen'	Yes	Consens.	OK	15	98,71	5,75	25	24,68	22,27

**Results considered extreme outliers have not been considered*

*** Consensus value could not be backed by the spiking done and the quality controls done, however, consensus' uncertainty is negligible, and the number of valid results is correct to evaluate it and within our accreditation.*

ANALITE	Z / Z' SCORE	NUMBER OF SCORES*	% SATISFACTORY	% QUESTIONABLE	% UNSATISFACTORY
'Phosphonic acid' (*)	Z'	19	79	0	21
'Fosetyl'	z	18	61	11	28
'Fosetly-Al (Sum)'	z	19	79	0	21
'Glyphosate'	z	18	83	0	17
'AMPA' (*)	-	14	-	-	-
'Boscalide'	Z'	17	76	12	12
'Cyproconazole'	z	17	88	0	12
'Fludioxonil'	z	17	88	0	12
'Pyriproxifen'	z	17	88	0	12

**Every result has been assigned with a z-score, including the results considered as extreme outliers.*

There are PT items available from this PT as Quality Control Material and can be acquired from TestQual's website.

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1. OBJECTIVE AND CALENDAR

The aim of the **TestQual 194 Kiwi** Proficiency Test is to gather information about the quality and accuracy of the results sent by the participating laboratories.

This proficiency test is based on the analysis of **Multi-analysis:**

Fosetyl,phosphonic acid (*), Glyphosate, AMPA (*), Multiresidues pesticides

in **Kiwi**. After the evaluation of the applications (depending on the LOQ of the laboratory and the checking the participant will receive the sample correctly), **20** laboratories were accepted, and the test material was sent in **May of 2024**. The assigned concentration value (µg/kg) for the analyte present in the sample was calculated by consensus among participating laboratories.

The laboratory results were considered satisfactory if the z-score parameter was |score|≤ 2, questionable if 2 ≤|score|≤ 3 and unsatisfactory if |score|> 3.

The most important dates of the proficiency test have been:

Date	Activity	Carried out by
2024/04/30	Deadline to request participation	Participants
2024/05/ 20-23	Sample delivery	TestQual
2024/06/14	Final date to submit results	Participants
2024/06/24 (2024/08/02)	Final report (Date when report is issued)	TestQual

*Participants are requested in the application to submit their LOQ/LOQs, for PTs with multiple possible analytes, if participants analyse above a certain percentage (as described in our internal procedure) of present/planned analytes the participation is accepted, a laboratory code is granted and sent by email to confirm the participation acceptance to the user of the TestQual's account.

Program coordinators: José Pedro Navarro Vicente

Each laboratory was assigned a unique code to participate in the proficiency test. These codes were only known by the laboratory and TestQual, and they were confidential during and after the proficiency test.

If any participant wants to appeal against the evaluation of their performance, their allegations must be sent by mail to jpnavarro@testqual.com.

2. TEST MATERIAL. DISTRIBUTION AND CONTROL.

TestQual 194 scheme is a proficiency test based in the analysis of **Multi-analysis: Fosetyl, phosphonic acid (*), Glyphosate, AMPA (*), Multiresidues pesticides** in **Kiwi** that has been spiked with:

STANDARD
PHOSPHONIC ACID
FOSETYL
FOSETYL-AL (SUM)
GLYPHOSATE
AMPA
BOSCALIDE
CYPROCONAZOLE
FLUDIOXONIL
PYRIPROXIFEN

About **10** Kg of matrix was bought in an specialized shop in Spain.

The material was cut in very small pieces including skin and it was grounded into a juice, which was spiked with a solution with the analytes of the proficiency test and poured into a homogenizer with controlled temperature to ensure complete homogeneity.

Once the lot of samples was ready the sample were stored in a temperature-controlled freezer below -20ºC until the dispatch of the samples.

Each sample had approximately **150 g.** Once the lot of samples was ready the samples were stored until distribution.

The distribution of samples was subcontracted to a courier previously homologated by TestQual.

The main criteria being the courier's delivery time to ensure the receival of the sample is correct in the participant's facilities.

In addition to this, TestQual stablished other characteristics important for a courier like shipping management (tracking, notifications, exceptions), and ensuring the delivery conditions are proper (low

breakage/lost ratio, keeping of cold chain, required documentation), always checking and evaluating they are complying with TestQual's requirements.

Before the samples were distributed, for the assessment of the homogeneity of the lot of samples that was prepared, ten samples from the lot were selected randomly and analysed in duplicate by TestQual´s collaborator laboratory under repeatability conditions.

Once ensured the homogeneity of the samples, these were sent to the participants by express courier, under the proper conditions of temperature and conservation.

For stability assessment purpose, three samples are analysed, in duplicate, before, during and at the end (once all laboratories had sent their results) of the proficiency test.

The quality controls subcontracted by TestQual, including verification of adequacy of the matrix, homogeneity/stability quality controls and any other analytical study required by TestQual will be subcontracted to an accredited laboratory in ISO/IEC 17025 into force.

Later in this report can be found the conclusions of these tests, all participants of this PT have available upon request the results and calculations done.

3. ANALYSIS

Each participant had to analyse the sample, detect and quantify the presence of **Multi-analysis: Fosetyl, phosphonic acid (*), Glyphosate, AMPA (*), Multiresidues pesticides** in the test material according to their own procedures. Then, fill in with just one result per analyte the "Results" Form of its Private Area of the website *www.testqual.com*, expressing the results in **µg/Kg**.

The techniques and analysis method used were chosen by the laboratories, and they are shown later in this report.

4. STATISTICAL RESULTS EVALUATION

The number of significant figures and the units are shown as they were submitted by the laboratories.

Any participant in this proficiency test can request further information or support about the statistical design that TestQual has developed.

TestQual consider as an **extreme outlier** any data which differs more than **50 %** to the median of all results reported by the laboratories. These extreme values are not taken into account for the calculation of the assigned value.

If there are enough results the **assigned value (X)** was determined by consensus using the robust average of the results considered valid for statistical computing (after removing extreme outliers), according to the standard ISO/IEC 13528 into force.

The **standard uncertainty (u_x)**(consensus) was calculated using robust statistics from the following formula:

$$u_x = s^*/\sqrt{p}$$

Being s* the robust standard deviation of the data and *p* the number of results not considered as extreme outliers.

The evaluation will be issued accredited in compliance with our accreditation's technical annex, which currently is between eight and ten results (requires negligible uncertainty) or if eleven or more results are available.

If the number of participants or the number of valid results does not comply with the required conditions (as previously stated), the evaluation of the analyte will be issued not accredited.

If the uncertainty of the assigned value (consensus) cannot be neglected, and depending how significant it is, the evaluation will be issued using z'-score or informative.

When only a few results would be available, the evaluation through consensus would be highly dependent on the results themselves (even with robust statistic), possible causing the evaluation to suffer a bias and do not issue action signals if required.

If the uncertainty of the assigned value (consensus) cannot be neglected and eight or fewer results are available, the evaluation will be done against the known value, obtaining the assigned value and its uncertainty through formulation/characterization (calculation design based in ISO 13528 into force). Being only accepted if it does not differ greatly from the available consensus value. The formulation value would be rejected if the difference between the characterization and the consensus value is greater than what our internal procedure determines.

If a significative difference is detected between consensus and characterization assigned values, TestQual would issue the evaluation either with consensus or characterization with informative value, detailing in the report the reasons.

Likewise, the assigned value obtained from consensus is always compared against the formulation done, ensuring there is not a significative difference between them, in order to offer the evaluation with the utmost confidence. Would a great difference be obtained between these two, it would be explained in the evaluation report and could include conclusions or thoughts about how this could have happened.

The following condition must be fulfilled in order to discard the contribution of the uncertainty and neglect it:

$$u_x \leq 0{,}3\ \hat{\sigma}$$

In case this condition is not fulfilled, the participants of the scheme will be informed in the report that the uncertainty of an assigned value is not negligible. For the parameters/analytes in which this situation occurs, the evaluation will be issued as z'-score according to the following calculation:

$$z'\text{-score} = (x_i - X)/\sqrt{\hat{\sigma}^2 + U_x^2}$$

Where x_i is the value reported by the laboratories, X is the assigned value, $\hat{\sigma}$ is the target standard deviation for each analyte and Ux is the uncertainty of the assigned value.
If applies and the evaluation meets the requirements of our technical annex, z'-score will is issued accredited.

The criteria for defining the z'-score values are:

	$\lvert z' \rvert$	≤2	Satisfactory
2 <	$\lvert z' \rvert$	≤3	Questionable
	$\lvert z' \rvert$	>3	Unsatisfactory

The z'-score is an underestimation of the z-score, for this reason, for those analytes in which the uncertainty of the assigned value cannot be neglected and a z'-score is issued, it will be accompanied by the percentual difference against z-score, this way participants should be able to complete evaluate their performance.
The evaluation could be informative if the difference between scores surpasses the limit contemplated in our procedure. If any analyte or evaluation is informative it will be indicated in the report through marking and a legend.

The **standard deviation for proficiency assessment**, also named **target standard deviation ($\hat{\sigma}$)**, comes from following formula:

$$\hat{\sigma} = b_i \cdot X$$

Being $b_i = \%_{RSDA}/100$, and $\%_{RSDA}$ is the **relative target standard deviation**.

In this case, the assigned relative standard deviation is **25 %**.
This value was previously set by the organizer and informed in the protocol of the proficiency test, based on the extensive experience of TestQual organizing this and similar proficiency tests.

Proficiency assessment (z-score): This parameter shows the competence and accuracy of the laboratory. It is calculated using the following formula:

$$z = (X_i - X)/\hat{\sigma}$$

Where X_i is the value reported by the each of the laboratories, X is the assigned value, and $\hat{\sigma}$ is the target standard deviation for each analyte.

The criterion for defining the z-score values is:

	$\lvert Z \rvert$	≤ 2	Satisfactory
$2 <$	$\lvert Z \rvert$	≤ 3	Questionable
	$\lvert Z \rvert$	> 3	Unsatisfactory

False negatives: Any analyte not reported in the results that were in the sample above the limit of quantification previously established to the proficiency test established by the organization **(10 µg/Kg)**. TestQual assigns to all false negatives a result equal to half the laboratory limit of quantitation (LOQ/2).

False positives: Those analytes reported in the results, which were not present in the test material, and are reported by the participant at concentrations higher than the limit of quantification of the proficiency test **(10 µg/Kg).**

Testing for sufficient homogeneity:

A certain number of samples were chosen at random and sent to be analyzed by TestQual's subcontracted laboratory in duplicate in repeatability conditions, the exact number is stated in section 8 of this report.

Once received the results, a statistical evaluation was performed, with the homogeneity evaluation of the based in ISO 13528 into force and The international harmonized Protocol for proficiency testing published by IUPAC.

The acceptance criterion to ensure that the randomly chosen samples are homogeneous (the fewer samples, the hardest this criterion becomes) is that the square of the estimated sampling standard deviation is below the critical value for accepting proper homogeneity:

$$S_{sam}^2 < c$$

Being S_{sam}^2 the estimated sampling standard deviation, obtained from the variance of the results sums and the experimental estimate of analytical standard deviation (S_{an}), which in turn is obtained from the differences between replicates of the same sample. Lastly, *c* is the limit value, which is obtained as ISO 13528 calculations and it takes into account two constants, obtained from two significance groups, which are multiplied with a term related to the target standard deviation and the S_{an}.
If $S_{sam}^2 < c$ is true, then the lot prepared will be considered sufficiently homogeneous and only then it would be distributed. With this test what we achieve is to check if the intra-sample deviation is lower than the inter-sample deviation.

If the results from the homogeneity test did not meet the criteria TestQual would communicate any change required in the proficiency test (new lot will be prepared, new calendar, etc.).

Testing for sufficient stability:

Three samples were analysed, in duplicate, before, during and at the end (once all laboratories have submitted their results) of the proficiency test. The acceptance criteria to ensure the samples have been stable during the proficiency test are the following:

$$\left|\frac{X_{t1}-X_{t2}}{X_{t1}}\right| \cdot 100 \leq 10\%$$

$$\left|\frac{X_{t1}-X_{t3}}{X_{t1}}\right| \cdot 100 \leq 10\%$$

Being $|(X_{t1} - X_{tn})/ X_{t1}|$ the difference between the average of the samples analysed before, during and at the end of the PT.

*The conclusions of these tests are shown later in this report.

Checking unimodality of the results:

The Kernel density representation can be used to evaluate if the results employed to calculate the assigned value are from different distributions or not, this representation is a non-parametric estimation that represents the population density function versus the data results not considered as outliers. The smoothing parameter or bin width *h* was selected as $h=0.75 \cdot \hat{\sigma}$ as referred in ISO 13528 into force. Through the evaluation of the symmetry of this distribution it is possible to evaluate the unimodality of the data set. These representations and the conclusions drawn can be found in later in this report.

5. RESULTS

5.1. RESULTS, LIMITS OF QUANTIFICATION AND Z-SCORE

Legend:

FN: Analyte no informed (not detected) by the participant (false negative).

<LOQ: Analyte in a concentration lower than the participant's limit of quantification. Possible false negative if the analyte was present.

*[a]: Result considered as statistically aberrant and not considered to calculate the assigned value.

Bold: Results with z-score≥|2|.

% diff.: Difference between z-score and z'-score, since the second includes the uncertainty in the calculation this is the degree in which z' is an underestimation of the performance. For context, around 6% difference implies a 0,1 change in the scores.

Xf: Assigned value (formulation).

(*) Analyte with evaluation not accredited.

Xc: Assigned value (consensus).

u_x: Uncertainty of the assigned value with 95% confidence.

X_i: Participant's reported value.

LOQ: Participant's Limit of quantification.

NA: Analyte not analysed by the participant.

$\hat{\sigma}$: Target standard deviation

	PHOSPHONIC ACID (*)			FOSETYL			FOSETYL-AL (SUM)		
	(Xc= 270,63 µg/Kg)			(Xc= 114,38 µg/Kg)			(Xc= 492,27 µg/Kg)		
	(Ux= 21,49 µg/Kg)			(Ux= 6,43 µg/Kg)			(Ux= 33,22 µg/Kg)		
	($\hat{\sigma}$= 67,66 µg/Kg)			($\hat{\sigma}$= 28,59 µg/Kg)			($\hat{\sigma}$= 123,07 µg/Kg)		
	% DIFF. 4,69		z-score	% DIFF. -		z-score	% DIFF. -		z-score
LABORATORY CODE	X_i µg/Kg	LOQ µg/Kg	Z'-score	X_i µg/Kg	LOQ µg/Kg	z-score	X_i µg/Kg	LOQ µg/Kg	z-score
TQ24-0194-001	267	10	-0,1	**238*[a]**	**10**	**4,3**	596,6	10	0,8
TQ24-0194-002	**FN**	**10**	**-3,9**	**FN**	**10**	**-3,8**	**FN**	**10**	**-4,0**
TQ24-0194-003	-	10		-	10		-	10	
TQ24-0194-004	311,2	10	0,6	101,2	10	-0,5	516	10	0,2
TQ24-0194-005	265	10	-0,1	103	10	-0,4	451	10	-0,3
TQ24-0194-006	170	10	-1,4	125	10	0,4	353	10	-1,1
TQ24-0194-007	260	10	-0,1	118	10	0,1	458	10	-0,3
TQ24-0194-008	400	-	1,8		-		680	-	1,5
TQ24-0194-009	**FN**	**10**	**-3,9**	**200*[a]**	**10**	**3,0**	610	10	1,0
TQ24-0194-010	**590*[a]**	**10**	**4,5**	**FN**	**10**	**-3,8**	**982*[a]**	**10**	**4,0**
TQ24-0194-011	153,3	10	-1,7	67,2	10	-1,6	273	10	-1,8
TQ24-0194-012	283	10	0,2	123	10	0,3	502	10	0,1
TQ24-0194-013	144,4	10	-1,8	129,3	10	0,5	322,796	10	-1,4
TQ24-0194-014	307	10	0,5	89	10	-0,9	501	10	0,1
TQ24-0194-015	216,6	10	-0,8	112,9	10	-0,1	400,98	10	-0,7
TQ24-0194-016	328	10	0,8	**55*[a]**	**10**	**-2,1**	495	10	0,0
TQ24-0194-017	269	10	0,0	**FN**	**10**	**-3,8**	**FN**	**10**	**-4,0**
TQ24-0194-018	**FN**	**10**	**-3,9**	**FN**	**10**	**-3,8**	**FN**	**10**	**-4,0**
TQ24-0194-019	350	10	1,1	130	10	0,5	600	10	0,9
TQ24-0194-020	338,11	10	1,0	144,33	10	1,0	598,41	10	0,9

	GLYPHOSATE			AMPA (*)		
	(Xc =	213,68	µg/Kg)	(Xf =	-	µg/Kg)
	(Ux=	15,95	µg/Kg)	(Ux=	-	µg/Kg)
	($\hat{\sigma}$=	53,42	µg/Kg)	($\hat{\sigma}$=	-	µg/Kg)
	% dif.	-	z-score	% dif.	-	z-score
LABORATORY CODE	X_i µg/Kg	LOQ µg/Kg	z-score	X_i µg/Kg	LOQ µg/Kg	z-score
TQ24-0194-001	**22*[a]**	**10**	**-3,6**	FN	10	
TQ24-0194-002	NA			NA		
TQ24-0194-003	-	10		-	10	
TQ24-0194-004	239,6	5	0,5	218	5	
TQ24-0194-005	227	10	0,2	FN	10	
TQ24-0194-006	180	10	-0,6	400*[a]	10	
TQ24-0194-007	223	10	0,2	NA		
TQ24-0194-008	**640*[a]**	**-**	**8,0**	300*[a]	-	
TQ24-0194-009	140	10	-1,4	110	10	
TQ24-0194-010	143	10	-1,3	95*[a]	10	
TQ24-0194-011	119,1	10	-1,8	14,3*[a]	10	
TQ24-0194-012	243	10	0,5	NA		
TQ24-0194-013	**FN**	**10**	**-3,9**	FN	10	
TQ24-0194-014	199	10	-0,3	NA		
TQ24-0194-015	181,88	10	-0,6	NA		
TQ24-0194-016	219	10	0,1	FN	10	
TQ24-0194-017	225	10	0,2	FN	10	
TQ24-0194-018	310	10	1,8	56*[a]	10	
TQ24-0194-019	310	10	1,8	200	10	
TQ24-0194-020	252,07	10	0,7	411,65*[a]	10	

	BOSCALIDE			CYPROCONAZOLE			FLUDIOXONIL			PYRIPROXIFEN		
	(Xc= 193,05 µg/Kg)			(Xc= 114,29 µg/Kg)			(Xc= 138,14 µg/Kg)			(Xc= 98,71 µg/Kg)		
	(Ux= 17,02 µg/Kg)			(Ux= 5,92 µg/Kg)			(Ux= 9,06 µg/Kg)			(Ux= 5,75 µg/Kg)		
	($\widehat{\sigma}$= 48,26 µg/Kg)			($\widehat{\sigma}$= 28,57 µg/Kg)			($\widehat{\sigma}$= 34,54 µg/Kg)			($\widehat{\sigma}$= 24,68 µg/Kg)		
	% DIFF. 5.69		z-score	% DIFF. -		z-score	% DIFF. -		z-score	% DIFF. -		z-score
LABORATORY CODE	X_i µg/Kg	LOQ µg/Kg	Z'-score	X_i µg/Kg	LOQ µg/Kg	z-score	X_i µg/Kg	LOQ µg/Kg	z-score	X_i µg/Kg	LOQ µg/Kg	z-score
TQ24-0194-001	104,6	10	-1,7	104,6	10	-0,3	112	10	-0,8	82,2	10	-0,7
TQ24-0194-002	242	10	1,0	133	10	0,7	171	10	1,0	112	10	0,5
TQ24-0194-003	-	10		-	10		-	10		-	10	
TQ24-0194-004	125,9	5	-1,3	81,4	5	-1,2	95,2	5	-1,2	66,9	10	-1,3
TQ24-0194-005	143	10	-1,0	104	10	-0,4	142	10	0,1	101	10	0,1
TQ24-0194-006	**300*[a]**	**10**	**2,1**	120	10	0,2	205	10	1,9	120	10	0,9
TQ24-0194-007	NA			NA			NA			NA		
TQ24-0194-008	280	10	1,7	150	10	1,2	190	10	1,5	120	10	0,9
TQ24-0194-009	150	10	-0,8	110	10	-0,2	120	10	-0,5	87	10	-0,5
TQ24-0194-010	194	10	0,0	110	10	-0,2	141	10	0,1	90,6	10	-0,3
TQ24-0194-011	**311,3*[a]**	**10**	**2,3**	140,2	10	0,9	140,2	10	0,1	101,5	10	0,1
TQ24-0194-012	217	10	0,5	90	10	-0,9	120	10	-0,5	80	10	-0,8
TQ24-0194-013	177	10	-0,3	94,9	10	-0,7	137	10	0,0	75,4	10	-0,9
TQ24-0194-014	200	10	0,1	110	10	-0,2	141	10	0,1	88	10	-0,4
TQ24-0194-015	NA			NA			NA			NA		
TQ24-0194-016	**FN**	**10**	**-3,9**	**FN**	**10**	**-3,8**	**FN**	**10**	**-3,9**	**FN**	**10**	**-3,8**
TQ24-0194-017	**FN**	**10**	**-3,9**	**FN**	**10**	**-3,8**	**FN**	**10**	**-3,9**	**FN**	**10**	**-3,8**
TQ24-0194-018	280	10	1,7	150	10	1,2	168	10	0,9	125	10	1,1
TQ24-0194-019	200	10	0,1	110	10	-0,2	110	10	-0,8	140	10	1,7
TQ24-0194-020	196,21	10	0,1	109,50	10	-0,2	94	10	-1,3	99	10	0,0

5.2. PARAMETERS OUTSIDE THE ACCREDITATION. JUSTIFICATION

The evaluation is offered outside the accreditation scope (not accredited) for not complying with all the requirements of our technical annex into force, in this case the stability control did not meet our criteria and upon reviewing the context of the PT we were not able to back this evaluation with enough confidence to issue it accredited.

ANALYTE
Phosphonic acid

The following analytes are not accredited because they are not included in our accreditation scope into force:

ANALYTE
AMPA

5.3. PARTICIPANTS & ORGANIZER COMMENTS

If any comment was not in English it has been translated.

Laboratory	Comment
(TestQual)	AMPA did not have many valid results and the dispersion of all results led to an uncertainty of the consensus too big, causing a difference between z-score and z'-score. This analyte did not meet our requirements to be able to evaluate it with the known value, which was 264.85 µg/Kg. When accounting all results, a doubt appears of being multimodal results. For all of these reasons from TestQual we have decided to not evaluate this analyte in this PT.

5.4. FALSE POSITIVES AND FALSE NEGATIVES

5.4.1. FALSE POSITIVES:

No false positives were reported for this proficiency test.

5.4.2. FALSE NEGATIVES:

Note: false negatives are assigned if a LOQ was submitted when the participation was requested but later, in the results' form, no results was submitted for those analytes that had a LOQ.

Laboratory	Analyte (µg/Kg)	LOQ (µg/Kg)	Assigned value (µg/Kg)
TQ24-0194-002	Phosphonic acid	10	270,63
TQ24-0194-009	Phosphonic acid	10	270,63
TQ24-0194-018	Phosphonic acid	10	270,63
TQ24-0194-002	Fosetyl	10	114,38
TQ24-0194-010	Fosetyl	10	114,38
TQ24-0194-017	Fosetyl	10	114,38
TQ24-0194-018	Fosetyl	10	114,38
TQ24-0194-002	Fosetyl-Al (Sum)	10	492,27
TQ24-0194-017	Fosetyl-Al (Sum)	10	492,27
TQ24-0194-018	Fosetyl-Al (Sum)	10	492,27
TQ24-0194-013	Glyphosate	10	213,68
TQ24-0194-001	AMPA	10	-
TQ24-0194-005	AMPA	10	-
TQ24-0194-016	AMPA	10	-
TQ24-0194-013	AMPA	10	-
TQ24-0194-017	AMPA	10	-
TQ24-0194-016	Boscalide	10	193,05
TQ24-0194-017	Boscalide	10	193,05
TQ24-0194-016	Cyproconazole	10	114,29
TQ24-0194-017	Cyproconazole	10	114,29
TQ24-0194-016	Fludioxonil	10	138,14
TQ24-0194-017	Fludioxonil	10	138,14

Laboratory	Analyte (µg/Kg)	LOQ (µg/Kg)	Assigned value (µg/Kg)
TQ24-0194-016	Pyriproxifen	10	98,71
TQ24-0194-017	Pyriproxifen	10	98,71

5.5. ASSIGNED VALUE AND TARGET STANDARD DEVIATION

ANALYTE	ACCREDITED?	ASSIGNED VALUE ORIGIN	EVALUATON OF THE ASSIGNED VALUE	NUMBER OF DATA*	ASSINGED VALUE (µg/Kg)	UNCERTAINTY (µg/Kg)	%tRSD	TARGET STANDARD DEVIATION (µg/Kg)	ROBUST STANDARD DEVIATION (µg/Kg)
'Phosphonic acid' (*)	No	Consens.	OK	15	270,63	21,49	25	67,66	83,22
'Fosetyl'	Yes	Consens.	OK	11	114,38	6,43	25	28,59	21,32
'Fosetly-Al (Sum)'	Yes	Consens.	-	15	492,27	33,22	25	123,07	128,64
'Glyphosate'	Yes	Consens.	OK	15	213,68	15,95	25	53,42	61,79
'AMPA' (*)	No	-	-	-	-	-	25	-	-
'Boscalide'	Yes	Consens.	OK	13	193,05	17,02	25	48,26	61,37
'Cyproconazole'	Yes	Consens.	OK	15	114,29	5,92	25	28,57	22,92
'Fludioxonil'	Yes	Consens.	OK**	15	138,14	9,06	25	34,54	35,07
'Pyriproxifen'	Yes	Consens.	OK	15	98,71	5,75	25	24,68	22,27

**Results considered extreme outliers have not been considered*

*** Consensus value could not be backed by the spiking done and the quality controls done, however, consensus' uncertainty is negligible, and the number of valid results is correct to evaluate it and within our accreditation.*

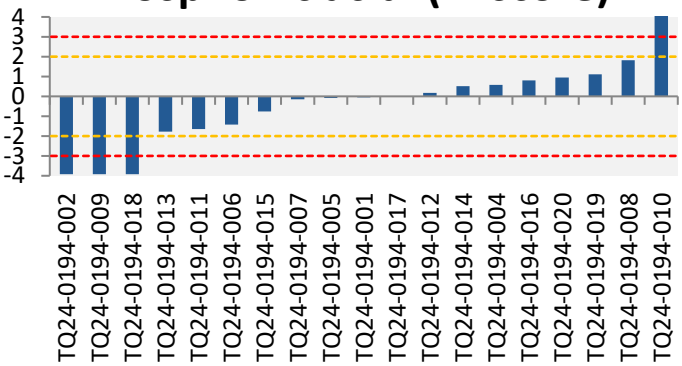
5.6. SATISFACTORY, QUESTIONABLE AND UNSATISFACTORY Z-SCORES

ANALITE	Z / Z' SCORE	NUMBER OF SCORES*	% SATISFACTORY	% QUESTIONABLE	% UNSATISFACTORY
'Phosphonic acid' (*)	Z'	19	79	0	21
'Fosetyl'	z	18	61	11	28
'Fosetly-Al (Sum)'	z	19	79	0	21
'Glyphosate'	z	18	83	0	17
'AMPA' (*)	-	14	-	-	-
'Boscalide'	Z'	17	76	12	12
'Cyproconazole'	z	17	88	0	12
'Fludioxonil'	z	17	88	0	12
'Pyriproxifen'	z	17	88	0	12

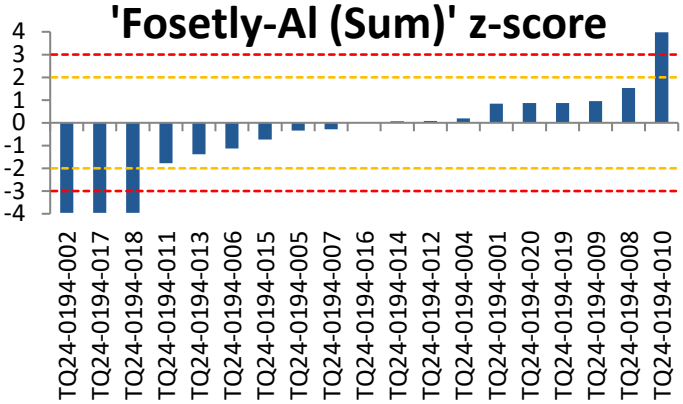
**Every result has been assigned with a z-score, including the results considered as extreme outliers.*

6. GRAPHICAL REPRESENTATION OF ASSIGNED Z-SCORES VALUES

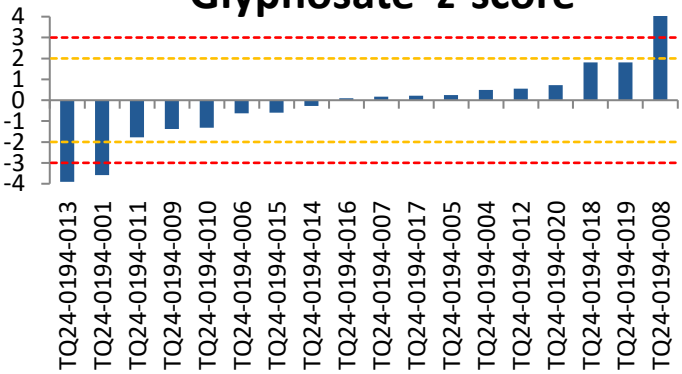
'Phosphonic acid' (Z'-score)



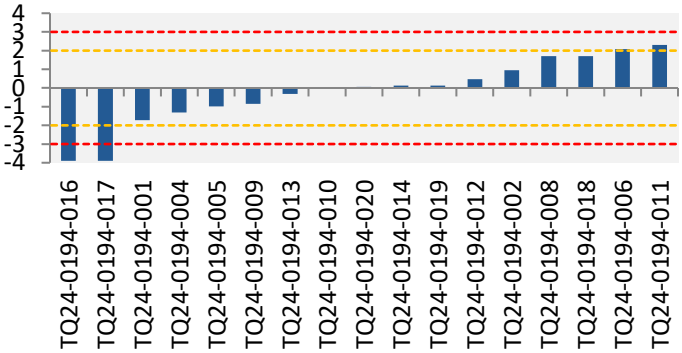
'Fosetly-Al (Sum)' z-score



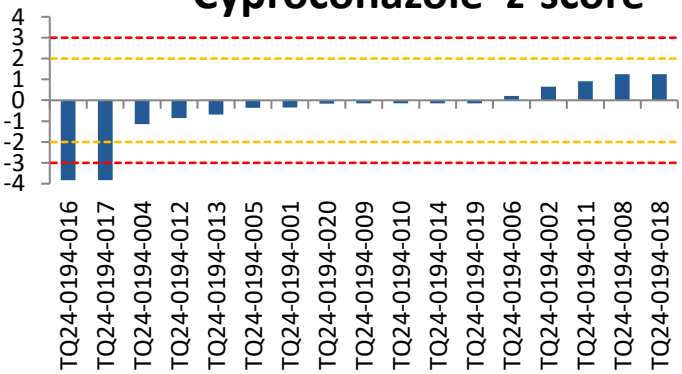
'Glyphosate' z-score



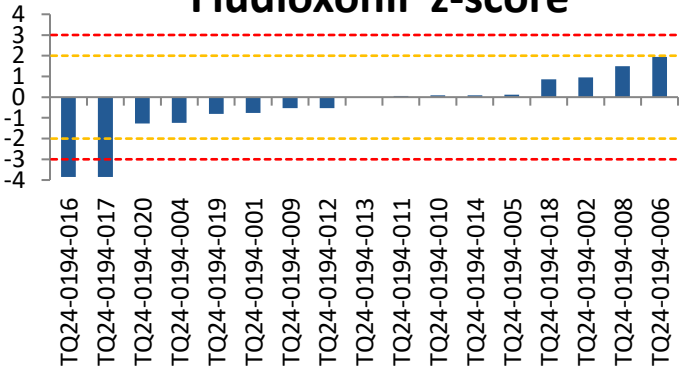
'Boscalide' (Z'-score)



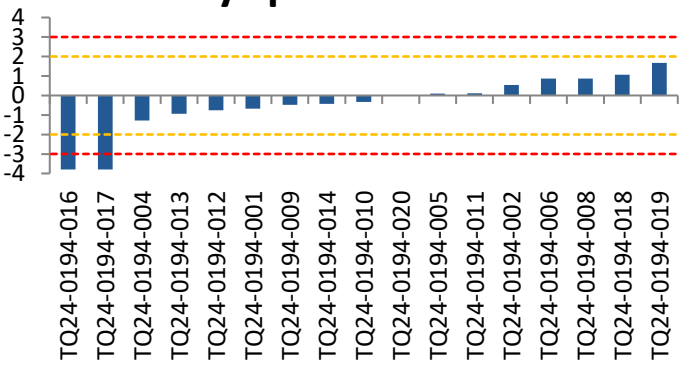
'Cyproconazole' z-score



'Fludioxonil' z-score



'Pyriproxifen' z-score



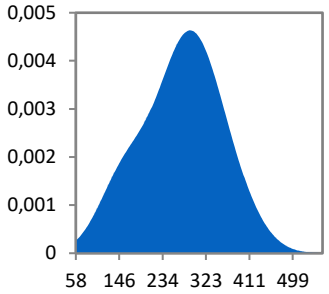
7. RESULTS DISTRIBUTION (KERNEL DENSITY):

For this proficiency test all the analytes have shown an adequate symmetry to be considered unimodal except AMPA, that shows multimodality.

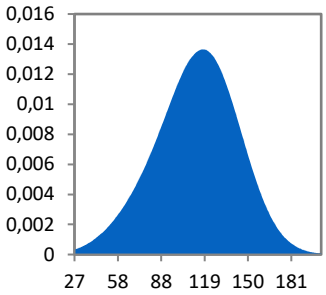
We have at the participant's disposal this same graphics with more detail and size.

X axis: Results (µg/Kg) ; and Y axis: Density

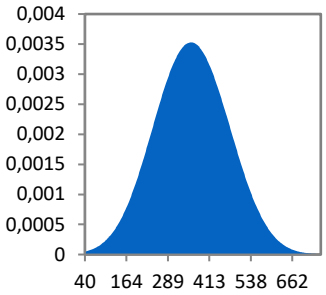
'Phosphonic acid'
Fixed h=50,7



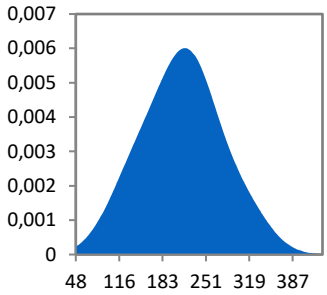
'Fosetyl'
Fixed h=21,4



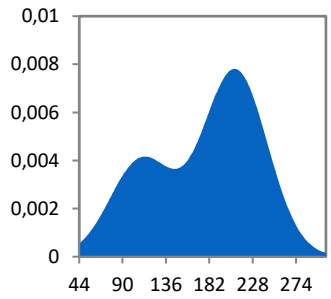
'Fosetly-Al (Sum)'
Fixed h=92,3



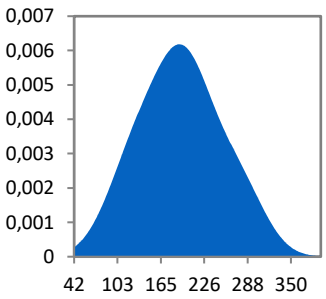
'Glyphosate'
Fixed h=40,1



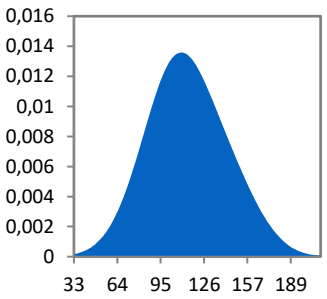
'AMPA'
Fixed h=33



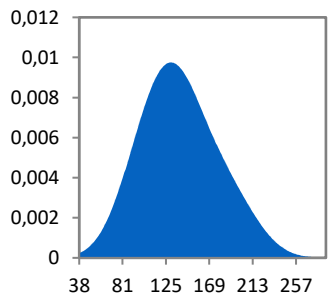
'Boscalide'
Fixed h=36,2



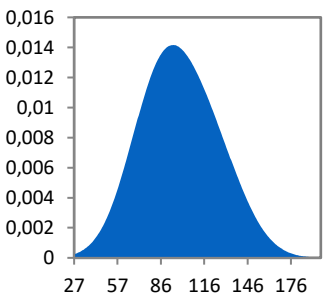
'Cyproconazole'
Fixed h=21,4



'Fludioxonil'
Fixed h=25,9



'Pyriproxifen'
Fixed h=18,5



8. HOMOGENEITY AND STABILITY OF THE TEST MATERIAL

To ensure the evaluation issued is useful, the lot of samples goes through two different kind of quality controls:

1. The homogeneity check to ensure the difference between-sample is not greater than the in-between variation of a single sample, evaluated analysing a representative number of samples from the lot prepared.
2. The stability check is used to ensure that any change in the concentration does not affect, or affects below a certain point, the score obtained by each participant. The analysis of the stability is done before and after sending the samples to the participants plus a last time after all results have been received. Depending on the context of the proficiency test and the results, and following different checks that we have specified in our procedure, we might still issue the evaluation with enough confidence (determining that the effect of a detected instability did not affect the participants).

The data employed to check the homogeneity are 20 results, all obtained in repeatability conditions from a set of randomized samples from the lot prepared, while the stability check is obtained from a total of 6 results, 2 from the initial concentration, 2 after sending the samples to the participants and the last 2 results after all results have been received. All the results used to check the criteria were not taken into account as absolute concentrations, only as relative data for the criteria calculation.

These results were analysed according to calculations on section 4 of this report, and these are the conclusion reached:

	Analyte	PHOSPHONIC ACID	FOSETYL	FOSETYL-AL (SUM)	GLYPHOSATE	AMPA
HOMOGENEITY	$c < 0.3*\sigma$	Satisfies criteria	Satisfies criteria	Satisfies criteria	Satisfies criteria	Satisfies criteria
STABILITY	$\|Difference\| \leq 10\%$ t_2 vs t_1	Does NOT satisfy criteria	Does NOT satisfy criteria	Does NOT satisfy criteria	Satisfies criteria	Does NOT satisfy criteria
	$\|Difference\| \leq 10\%$ t_3 vs t_1	Does NOT satisfy criteria	Does NOT satisfy criteria	Satisfies criteria	Does NOT satisfy criteria	Does NOT satisfy criteria

HOMOGENEITY	Analyte	BOSCALIDE	CYPROCONAZOLE	FLUDIOXONIL	PYRIPROXIFEN
	$c < 0.3*\sigma$	Satisfies criteria	Satisfies criteria	Satisfies criteria	Satisfies criteria
STABILITY	$\|Difference\| \leq 10\%$ t_2 vs t_1	Satisfies criteria	Satisfies criteria	Satisfies criteria	Does NOT satisfy criteria
	$\|Difference\| \leq 10\%$ t_3 vs t_1	Satisfies criteria	Satisfies criteria	Satisfies criteria	Does NOT satisfy criteria

Fosetyl→Consensus uncertainty is negligible, therefore the detected instability by the collaborator Laboratory have not affected the participants and the evaluation is issued with enough confidence within our accreditation.

Fosetyl (Sum)→ Consensus uncertainty is negligible, therefore the detected instability by the collaborator Laboratory have not affected the participants and the evaluation is issued with enough confidence within our accreditation, additionally, the last stability analysis passed correctly.

Glyphosate→ Consensus uncertainty is negligible, therefore the detected instability by the collaborator Laboratory have not affected the participants and the evaluation is issued with enough confidence within our accreditation.

AMPA→ Too much dispersion of results and low number of valid results led us to not being able to evaluate it with consensus, additionally it did not meet our criteria to use the known value (spiking) to evaluate it, therefore, leaved us with the only choice of not evaluating it. Not enough data method has been provided to identify a multimodality due to the method.

Piriproxifen→ Consensus uncertainty is negligible, therefore the detected instability by the collaborator Laboratory have not affected the participants and the evaluation is issued with enough confidence within our accreditation.

9. ANALYTICAL METHODS USED BY THE LABORATORIES

PHOSPHONIC ACID						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	NO.	10	MeOH	Solvent extraction.	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-002	-	-	-	-	-	-
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	5	MeOH	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	YES	10	meoh	-	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-006	YES	10	MeOH acidified	QuPPe	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-007	YES quppe	10	MeOH	Solvent extraction.	Solvent matched - External standard	HPLC-MS/MS
TQ24-0194-008	-	-	-	-	-	-
TQ24-0194-009	-	-	-	-	-	-
TQ24-0194-010	-	-	-	-	-	-
TQ24-0194-011	NO.	10	MeOH	Solvent extraction.	Matrix matched	HPLC-MS/MS
TQ24-0194-012	YES	10	MeOH	-	Matrix matched - Internal standard	HPLC-MS/MS.
TQ24-0194-013	YES	10	-	Solvent extraction.	Matrix matched - Standard addition	HPLC-MS/MS.
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	YES	5	Methanol acidified with formic acid	Solvent extraction.	Solvent matched - Internal standard	Other. LC-MS/MS
TQ24-0194-016	YES	10	methanol acid	-	Solvent matched - External standard	HPLC-MS/MS
TQ24-0194-017	YES	-	acidified MeOH	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-018	-	-	-	-	-	-
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

FOSETYL						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	-	-	-	-	-	-
TQ24-0194-002	-	-	-	-	-	-
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	5	MeOH	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	YES	10	meoh	-	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-006	YES	10	MeOH acidified	QuPPe	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-007	YES quppe	10	MeOH	Solvent extraction.	Solvent matched - External standard	HPLC-MS/MS
TQ24-0194-008	-	-	-	-	-	-
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	HPLC-MS/MS
TQ24-0194-010	-	-	-	-	-	-
TQ24-0194-011	YES	10	MeOH	Solid phase extraction.	Matrix matched	HPLC-MS/MS
TQ24-0194-012	YES	10	MeOH	-	Matrix matched - Internal standard	HPLC-MS/MS.
TQ24-0194-013	YES	10	-	Solvent extraction.	Matrix matched - Standard addition	HPLC-MS/MS.
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	YES	5	Methanol acidified with formic acid	Solvent extraction.	Solvent matched - Internal standard	Other. LC-MS/MS
TQ24-0194-016	YES	10	methanol acid	-	Solvent matched - External standard	HPLC-MS/MS
TQ24-0194-017	-	-	-	-	-	-
TQ24-0194-018	-	-	-	-	-	-
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

GLYPHOSATE						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	NO.	10	MeOH	Solvent extraction.	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-002	-	-	-	-	-	-
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	5	MeOH	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	YES	10	meoh	-	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-006	YES	10	MeOH acidified	QuPPe	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-007	YES quppe	10	MeOH	Solvent extraction.	Solvent matched - External standard	HPLC-MS/MS
TQ24-0194-008	-	-	-	-	-	-
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	HPLC-MS/MS
TQ24-0194-010	No.	-	-	-	-	-
TQ24-0194-011	YES	10	MeOH	Solid phase extraction.	Matrix matched	HPLC-MS/MS.
TQ24-0194-012	YES	10	H2O	-	Matrix matched - Internal standard	HPLC-MS/MS.
TQ24-0194-013	-	-	-	-	-	-
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	YES	5	Methanol acidified with formic acid	Solvent extraction.	Solvent matched - Internal standard	Other. LC-MS/MS
TQ24-0194-016	YES	10	methanol acid	-	Solvent matched - External standard	HPLC-MS/MS
TQ24-0194-017	YES	-	-	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-018	YES	10	ACN	QuEChERS	Matrix matched - Standard addition	GC MS/MS.
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

AMPA						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	-	-	-	-	-	-

AMPA						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-002	-	-	-	-	-	-
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	5	MeOH	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	-	-	-	-	-	-
TQ24-0194-006	YES	10	MeOH acidified	QuPPe	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-007	-	-	-	-	-	-
TQ24-0194-008	-	-	-	-	-	-
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	HPLC-MS/MS.
TQ24-0194-010	NO.	-	-	-	-	-
TQ24-0194-011	YES	10	MeOH	Solvent extraction.	Matrix matched	HPLC-MS/MS
TQ24-0194-012	-	-	-	-	-	-
TQ24-0194-013	-	-	-	-	-	-
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	-	-	-	-	-	-
TQ24-0194-016	-	-	-	-	-	-
TQ24-0194-017	-	-	-	-	-	-
TQ24-0194-018	NO.	10	MeOH	Solvent extraction.	Matrix matched - Standard addition	HPLC-MS/MS.
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

BOSCALIDE						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	NO.	10	ACN	QuEchERS	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-002	YES	10	ACN	QuEchERS	Matrix matched - External standard	HPLC-MS/MS
TQ24-0194-003	-	-	-	-	-	-

BOSCALIDE						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-004	YES	10	ACN	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	YES	10	acn	QuEchERS	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-006	YES	10	MeOH acidified	QuPPe	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-007	-	-	-	-	-	-
TQ24-0194-008	NO.	10	ACN	QuEchERS	Matrix matched - Internal standard	HPLC-MS/MS
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	GC MS/MS.
TQ24-0194-010	YES	10	-	-	-	-
TQ24-0194-011	YES	10	ACN	QuEchERS	Matrix matched - Internal standard	-
TQ24-0194-012	YES	10	ACN	QuEchERS	Matrix matched - External standard	HPLC-MS/MS
TQ24-0194-013	YES	10	ACN	QuEchERS	Matrix matched - Standard addition	HPLC-MS/MS.
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	-	-	-	-	-	-
TQ24-0194-016	-	-	-	-	-	-
TQ24-0194-017	-	-	-	-	-	-
TQ24-0194-018	YES	10	ACN	QuEChERS	Matrix matched - External standard	GC MS/MS. LC MS/MS
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

CYPROCONAZOLE						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	NO.	10	ACN	QuEchERS	Solvent matched - External standard	HPLC-MS/MS.
TQ24-0194-002	YES	10	AcOEt	QuEchERS	Matrix matched - External standard	GC MS/MS

CYPROCONAZOLE						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	10	ACN	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	YES	10	acn	QuEchERS	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-006	YES	15	ACN acidified	QuEchERS	Solvent matched	Other
TQ24-0194-007	-	-	-	-	-	-
TQ24-0194-008	NO.	10	ACN	QuEchERS	Matrix matched - Internal standard	HPLC-MS/MS
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	GC MS/MS.
TQ24-0194-010	YES	10	-	-	-	-
TQ24-0194-011	YES	10	ACN	QuEchERS	Matrix matched - Internal standard	-
TQ24-0194-012	YES	10	EthylAcetate	QuEchERS	Matrix matched - External standard	GC MS/MS.
TQ24-0194-013	YES	10	EthylAcetate	QuEchERS	Matrix matched - Standard addition	GC MS/MS.
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	-	-	-	-	-	-
TQ24-0194-016	-	-	-	-	-	-
TQ24-0194-017	-	-	-	-	-	-
TQ24-0194-018	YES	10	ACN	QuEChERS	Matrix matched - External standard	GC MS/MS.
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

FLUDIOXONIL						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	NO.	10	ACN	QuEchERS	Solvent matched - External standard	GC MS/MS
TQ24-0194-002	YES	10	AcOEt	QuEchERS	Matrix matched - External standard	GC MS/MS
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	10	ACN	Solvent extraction.	Solvent matched	HPLC-MS/MS

FLUDIOXONIL						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-005	YES	10	acn	QuEchERS	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-006	YES	15	ACN acidified	QuEchERS	Solvent matched	Other
TQ24-0194-007	-	-	-	-	-	-
TQ24-0194-008	NO.	10	ACN	QuEchERS	Matrix matched - Internal standard	HPLC-MS/MS
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	GC MS/MS.
TQ24-0194-010	-	-	-	-	-	-
TQ24-0194-011	-	-	-	-	-	-
TQ24-0194-012	YES	10	ACN	QuEchERS	Matrix matched - External standard	HPLC-MS/MS
TQ24-0194-013	YES	10	ACN	QuEchERS	Matrix matched - Standard addition	HPLC-MS/MS.
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	-	-	-	-	-	-
TQ24-0194-016	-	-	-	-	-	-
TQ24-0194-017	-	-	-	-	-	-
TQ24-0194-018	YES	10	ACN	QuEChERS	Matrix matched - External standard	GC MS/MS.
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

PYRIPROXIFEN						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-001	YES	10	ACN	QuEchERS	Solvent matched - External standard	GC MS/MS
TQ24-0194-002	YES	10	AcOEt	QuEchERS	Matrix matched - External standard	GC MS/MS
TQ24-0194-003	-	-	-	-	-	-
TQ24-0194-004	YES	10	ACN	Solvent extraction.	Solvent matched	HPLC-MS/MS
TQ24-0194-005	YES	10	acn	QuEchERS	Solvent matched - Internal standard	HPLC-MS/MS.
TQ24-0194-006	YES	15	ACN acidified	QuEchERS	Solvent matched - Internal standard	HPLC-MS/MS.

PYRIPROXIFEN						
LABORATORY CODE	ACREDITATED METHOD?	WEIGHT (g)	EXTRACTION SOLVENT	EXTRACTION TECHNIQUE	CALIBRATION	ANALYSIS TECHNIQUE
TQ24-0194-007	-	-	-	-	-	-
TQ24-0194-008	NO.	10	EthylAcetate/Hexane	QuEchERS	Matrix matched - Internal standard	GC MS/MS.
TQ24-0194-009	YES	10	-	QuEchERS	Matrix matched - Internal standard	GC MS/MS.
TQ24-0194-010	-	-	-	-	-	-
TQ24-0194-011	YES	10	ACN	QuEchERS	Matrix matched	-
TQ24-0194-012	YES	10	EthylAcetate	QuEchERS	Matrix matched - External standard	GC MS/MS.
TQ24-0194-013	YES	10	EthylAcetate	QuEchERS	Matrix matched - Standard addition	GC MS/MS.
TQ24-0194-014	-	-	-	-	-	-
TQ24-0194-015	-	-	-	-	-	-
TQ24-0194-016	-	-	-	-	-	-
TQ24-0194-017	-	-	-	-	-	-
TQ24-0194-018	YES	10	ACN	QuEChERS	Matrix matched - External standard	GC MS/MS.
TQ24-0194-019	-	-	-	-	-	-
TQ24-0194-020	YES	-	-	-	-	-

10. REFERENCES

TestQual Proficiency Testing Schemes are based on the following standards:

UNE-EN ISO/IEC 17043, into force. Conformity assessment- General requirements for proficiency testing.

ISO13528 into force, second edition 2015-08-01. Statistical methods for use in proficiency testing by interlaboratory comparison.

THE INTERNATIONAL HARMONIZED PROTOCOL FOR THE PROFICIENCY TESTING OF ANALYTICAL CHEMISTRY LABORATORIES

Commission Regulation (EU) 2022/1324 of 28 july 2022 amending Annexes II, III and IV to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for acibenzolar-S-methyl, aqueous extract from the germinated seeds of sweet Lupinus albus, azoxystrobin, clopyralid, cyflufenamid, fludioxonil, fluopyram, **FOSETYL**, metazachlor, oxathiapiprolin, tebufenozide and thiabendazole in or on certain products
DO L 200 de 29.7.2022, p. 68/108

Commission Regulation (EU) No 293/2013 of 20 March 2013 amending Annexes II and III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for emamectin benzoate, etofenprox, etoxazole, flutriafol, **GLYPHOSATE**, phosmet, pyraclostrobin, spinosad and spirotetramat in or on certain products.
DO L 96 de 5.4.2013, p. 1/30: ES // EN

END OF THE REPORT