GHIC TECHNICAL ADDENDUM

Honey proteomics: Eurofins THPP1 evidence

Eurofins clarification, laboratory comparisons and implications for honey control

The new Eurofins clarification materially strengthens the documented basis for using THPP1 to identify specified foreign enzymes in honey. It supports a method-specific assessment of capability. Protein identity, the assessment of its introduction and product compliance remain distinct questions. [1, 2, 3, 4]

What has changed

The statement made available for this review on 6 October 2026 identifies the THPP1 target panel, confirms historical coverage of *Bacillus amyloliquefaciens* for earlier GHIC samples, and reports comparisons with CAFIA/SZPI. It describes a documented bilateral study with concordant positive and negative findings and a jointly signed final report. The original email date header was not supplied. [1]

Public documents independently support the existence of the specified proteomics procedure within the laboratory's flexible accreditation scope and describe its analytical approach. The correspondence links commercial test code THPP1 to that procedure. These are complementary sources of evidence with different scopes. [1, 2, 3, 4, 5]

What has been reviewed

This addendum considers the supplied statement and the cited public documents. The jointly signed comparison report, complete sample-level results and historical GHIC method records have not been provided for this review. The account of the comparisons is therefore attributed to Eurofins; it is not presented as an independent GHIC examination of the full dataset.

> **GHIC assessment**
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> **The appropriate next step is to make the existing evidence reviewable: document the comparison scope, relevant method versions and rules for trace findings. A general claim that THPP1 cannot detect the specified enzymes would disregard the new evidence.**

This development reinforces the original distinction between a targeted analytical capability and comprehensive authenticity assurance. A confirmed finding can be decisive for a defined question; a negative panel result cannot exclude every form of adulteration. Neither laboratory agreement nor accreditation alone establishes the cause of a protein finding or the compliance of an individual batch.

Supplement to the GHIC statement of 5 October 2026. Evidence available: 6 October 2026. Sources: page 6. Global Honey Integrity Council | Bernhard Heuvel, Founder & CEO.

ANALYTICAL COVERAGE

A defined enzyme panel with distinct levels of inference

Kunert's statement identifies the relevant THPP1 enzyme classes. The public Whitepaper, updated on 21 February 2026, provides a more specific target list, including the entries below. A panel entry describes an analytical target; it does not automatically establish species-level discrimination in every sample. [1, 4]

Target group	Listed reference source or protein
α-Amylases	Aspergillus oryzae; Bacillus licheniformis; Bacillus amyloliquefaciens
β-Amylase	Hordeum vulgare
Amyloglucosidase / glucoamylase	Aspergillus niger; Rhizopus sp.
Invertase	Saccharomyces cerevisiae
Selected bee proteins	MRJP1; Apis mellifera α-glucosidase and α-amylase

Historical GHIC samples

Eurofins expressly confirms that B. amyloliquefaciens was included in the method version applied to previous GHIC samples. That confirmation of historical method coverage comes from the correspondence. The public panel supports the stated coverage but does not independently identify the version or reporting rule used for every earlier commission. Where a particular result is disputed, the existing report and version record should provide that link. [1]

What sequence-based detection adds

LC-MS/MS can identify characteristic peptides and distinguish relevant proteins that have similar enzymatic functions. A conventional total activity result does not by itself identify the enzyme producing that activity. A normal sugar profile answers a different analytical question. Under suitable conditions, identifiable peptides can remain after enzymatic activity has been lost. [4, 9]

The interpretation must match the discriminating power of the peptides: a protein variant, a defined group, a genus or a species. The interpretation must account for sequences shared by different proteins. The label of a reference enzyme alone does not prove that the detected material came from a particular industrial producer.

Detection is not an exact quantity

The published Eurofins workflow reports qualitative foreign-enzyme findings. Its stated detection range depends on equipment and sample preparation. These descriptions must not be converted into an exact enzyme concentration, syrup proportion or universal reporting threshold. [4]

Panel coverage, taxonomic specificity and demonstrated performance in a particular comparison are separate attributes. A target can be included in a method without having appeared in the reported positive comparison samples.

LABORATORY COMPARISONS

Agreement is meaningful; its scope must be visible

Eurofins reports several comparisons with CAFIA/SZPI in 2025 and 2026. A documented bilateral study reportedly included independent examination of positive and negative honey samples in both accredited laboratories, with concordant results and a jointly signed report. Additional market and official-procedure samples were examined outside that study. Sample numbers and the full result matrix are not supplied in the statement. [1]

Reported evidence	Supported conclusion and limit
Concordant positive findings	Supports practical detection in the tested markers and samples; does not establish universal sensitivity.
Concordant negative findings	Supports agreement within the tested scope; does not establish that every target was independently known to be absent.
Two accredited laboratories	A relevant comparison. It does not by itself establish identical thresholds, general equivalence or freedom from shared errors.

The involvement of only two laboratories does not invalidate the exercise. DAkkS rule R-17025-PL permits self-organised comparisons involving two or more laboratories under its conditions where suitable proficiency testing is unavailable. Whether this particular study satisfies those conditions requires its documentation. It should not be described as a broad multilaboratory validation or EU harmonisation exercise. [6]

Resolve trace findings at the correct level

According to Eurofins, jointly assessed differences in individual trace or borderline findings could be explained by instrument sensitivity or reporting thresholds. This is analytically plausible. For a disputed sample, distinguish a confirmed identification below another laboratory's reporting threshold from an incomplete identification, and from an actual disagreement about protein identity. These situations require different explanations. [1]

The relevant sensitivity is that of the complete procedure. Extraction, digestion, matrix effects and confirmation criteria may matter alongside the instrument. A negative report from a less sensitive procedure does not automatically invalidate a sufficiently confirmed positive result. Conversely, a weak signal does not become conclusive merely because the instrument is sensitive.

Minimum comparison record

Show independent sample counts, markers represented, the basis for positive/negative reference status, method versions, all result categories and treatment of borderline findings. Without these, general error rates or equivalence claims cannot be assessed.

ACCREDITATION AND REGULATORY USE

Recognise the accredited scope; apply the appropriate legal test

A publicly documented procedure

Eurofins' public procedure list, ICS MV 441-01 L02 V7, dated 1 April 2026, lists ICS SOP 520-33, issue 2025-09, for honey under Flex C. The procedure concerns characteristic proteins and foreign enzymes determined by LC-MS/MS proteome analysis. The DAkkS annex D-PL-20965-01-01, dated 19 January 2026, defines the flexible analytical field. Kunert's statement explicitly links THPP1 to the listed SOP. [1, 2, 3]

The detailed procedure list and the DAkkS annex must be read together. Flexible accreditation is not merely an unsupported laboratory claim. It also does not mean that every marker or every compliance conclusion was separately approved in advance. The SOP issue date alone does not establish which version or accreditation status applied on every earlier test date. [2, 3, 6]

Method selection and official designation

Article 34 of Regulation (EU) 2017/625 establishes a hierarchy: applicable Union requirements take precedence, followed by the recognised methods and, under the specified conditions, appropriately developed and validated alternatives. Accreditation does not remove this method-selection requirement. [8]

For official testing, Article 37 generally requires separate written laboratory designation for defined tasks, subject to its limited exceptions. Collaboration with an authority or analysis of samples from official proceedings does not by itself prove designation. The Eurofins statement correctly avoids making that inference. Equally, the statement's absence of a designation document does not establish that no lawful designation or commission exists. [1, 8]

From suspicion to an established infringement

Article 137 requires investigation where non-compliance is suspected; Article 138 addresses action where it is established. A credible private laboratory finding can inform that examination. It is not automatically an official determination. The competent authority must assess the evidence and choose appropriate measures. [8]

> **A specific breach can stand independently**
>
> **Annex II of the Honey Directive prohibits additions other than honey. A sufficiently established unauthorised enzyme addition can therefore support non-compliance without separately quantifying added syrup. Protein identity alone does not establish that addition. No automatic recall conclusion follows from the analytical finding.** [7, 8]

FOODQS AND THE NEXT QUALITY-ASSURANCE STEP

Turn shared analytical strengths into reviewable decisions

FoodQS describes proteomics as a specific tool that can detect relevant enzyme proteins, including inactive forms, while stressing interpretation, trace findings and complementary testing. The Eurofins clarification adds evidence about a particular procedure and its comparisons. It neither validates every proteomics method nor resolves every source-attribution concern raised by FoodQS. [1, 9]

The common scientific position is useful: targeted protein identity can add evidence that routine sugar or total enzyme-activity testing does not supply. The remaining task is to determine what the finding means in the batch examined. A possible feeding contribution or natural microbial source must be tested against the actual marker and circumstances; an abstract possibility neither proves nor excludes that explanation.

A three-stage quality-assurance process

Stage	Documented outcome
1 | Confirm identity	Establish sample identity, applicable method version, marker specificity, confirmation criteria and controls. Record whether the finding is confirmed, incomplete or below a reporting threshold.
2 | Assess introduction	Compare the marker pattern and available level information with plausible natural, feeding, processing or contamination sources. Use relevant reference material and production records; distinguish unresolved explanations from demonstrated causes.
3 | Decide on compliance	Identify the precise product requirement and evidence supporting any breach. Keep responsibility and intent separate. Assign the next investigation or corrective action to the appropriate decision-maker.

Request the existing records that answer the remaining questions

First, obtain the signed comparison report or a jointly approved, anonymised summary with sample counts, marker coverage and the complete outcome matrix. Second, link any disputed earlier GHIC result to its recorded method version. Third, obtain the applicable trace/confirmation/reporting rules and targeted supporting data for unresolved cases. These requests build on the answers already supplied; they do not repeat the general panel-coverage question.

> **GHIC position**
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> **Use the strengthened method-specific evidence. Examine source attribution where it matters. Give a sufficiently established unauthorised addition practical effect in the compliance assessment. Further harmonisation should improve consistency; it should not replace examination of a substantiated current finding.**

For public communication, attribute the comparison results to the supplied Eurofins statement until the underlying report has been reviewed. Absence of a reply or of publicly available data is not proof of either compliance or fraud.

SOURCES AND EVIDENCE STATUS

References

[1] **Christof Kunert / Eurofins: statement on THPP1 and comparisons with CAFIA/SZPI.** Full message text made available for this review on 6 October 2026. Original email date header and underlying link URLs were not supplied. The signed comparison report was not provided for this review. Source: supplied correspondence; no public URL.

[2] **Eurofins: public list of procedures within the flexible accreditation scope.** ICS MV 441-01 L02 V7, 1 April 2026, p. 4: ICS SOP 520-33, issue 2025-09, honey, Flex C.
Eurofins procedure list - original PDF

[3] **DAkkS: accreditation annex D-PL-20965-01-01.** 19 January 2026; flexible scope and chromatographic methods, especially pp. 2-3. Read with the laboratory's detailed list.
DAkkS annex - original PDF

[4] **M. Witt and C. Kunert: Eurofins Proteomics Whitepaper.** Updated 21 February 2026. Printed pp. 5-6: target panel, qualitative findings and method-dependent detection range. Laboratory publication, not a full comparison report.
Eurofins Whitepaper - original PDF

[5] **Eurofins: SOTA statement.** Ritterhude, 4 March 2026. Page 1 identifies THPP1 as a proteomics test code.
Eurofins SOTA statement - original PDF

[6] **DAkkS: R-17025-PL.** Revision 1.0, 31 January 2023. In particular III 7.7.2 on laboratory comparisons and II 7.8.4 on flexible scope records.
DAkkS laboratory accreditation rule - PDF

[7] **Directive 2001/110/EC relating to honey.** Consolidated version of 14 June 2026; particularly Annex II.
EUR-Lex - current consolidated Honey Directive

[8] **Regulation (EU) 2017/625 on official controls.** Consolidated version of 5 January 2025; particularly Articles 9, 34, 37, 137 and 138.
EUR-Lex - consolidated Official Controls Regulation, PDF

[9] **FoodQS: Proteomics in honey analysis.** Article of 10 September 2026 on the contribution of proteomics to authenticity testing.
FoodQS - original article

Public documents support the specific statements cited. Laboratory correspondence remains attributed. Consolidated legal texts are documentation aids; the Official Journal texts are authoritative. No new sample testing or batch-specific determination is reported in this addendum.