GHIC STATEMENT

Proteomics in honey control

Why targeted protein detection can identify non-compliant products

Proteomics is particularly well suited to detecting certain breaches of European honey requirements: it can establish the identity of enzymes foreign to honey directly at the molecular level. The essential conditions are a method validated for the specific detection objective and a robust interpretation of the finding. [2, 7, 9, 14]

Position of the Global Honey Integrity Council

GHIC supports the targeted use of proteomics in food business operators' own checks and official honey controls. Its particular value lies in distinguishing the biological sources of specific proteins, thereby revealing interventions that may remain undetected by conventional sugar or enzyme activity tests alone. A confirmed unauthorised enzyme addition can independently establish the non-compliance of a product marketed as honey. Establishing a particular proportion of added syrup is not additionally required to demonstrate that breach. [2, 7, 9]

The FoodQS publication of 10 September 2026 confirms high specificity, the potential to detect inactive enzymes, and the validation and accreditation of its own method. Its reservations mainly concern the scope of negative results and the interpretation of positive trace findings. GHIC addresses these points and clarifies their regulatory significance. [1]

> **The central point**
>
> **A method does not have to detect every conceivable form of adulteration to provide robust evidence of a specific breach of the law.**

Three distinct evidential steps are required: **establish the protein's identity, assess the nature of its introduction, and substantiate the specific legal consequence.** The sequence of a microbial enzyme does not, by itself, identify it as industrially produced. Natural sources, carry-over from bee feeding, contamination and analytical misidentification must be examined according to their plausibility. This assessment strengthens the evidential value of a confirmed finding. [8, 12]

GHIC calls for robust foreign-enzyme findings to be investigated consistently and, where non-compliance is established, for appropriate action against marketing the product as honey. Harmonisation, reference collection development and interlaboratory trials should improve implementation. Existing obligations to conduct controls and take remedial action already apply. [3, 4, 17]

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Global Honey Integrity Council (GHIC)
Position as of 5 October 2026

Statement and core argument: pp. 1-2 · FoodQS assessment: p. 3 · Scientific basis: pp. 4-6 · Official application and implications: pp. 7-9 · References: pp. 10-11

CORE ARGUMENT

Specific evidence can support a clear legal consequence

1. The definition of honey protects its origin and composition

Directive 2001/110/EC reserves the name honey for the product defined in Annex I. It specifies natural source materials and their processing by *Apis mellifera*. Annex II prohibits additions other than honey. The protection therefore extends beyond an appropriate ratio of fructose to glucose. A product may meet routine chemical parameters while a proven unauthorised addition makes it non-compliant. [2]

A confirmed addition of an enzyme for a technical purpose breaches this prohibition, whether the enzyme was introduced directly to alter diastase activity or together with added syrup. Once the unauthorised introduction has been sufficiently established, its precise dose does not first have to be expressed as a proportion of syrup. If, however, it remains unclear whether any unauthorised introduction occurred, the legal consequence must not be inferred from the term foreign enzyme alone. [2, 8]

Level of conclusion	What must be established
Analytical identity	Specific peptides, suitable confirmation and controlled analytical conditions establish assignment to a protein or a distinguishable protein group.
Non-compliance	After plausible alternatives have been considered, the substantiated finding establishes a specific breach of the product definition, the prohibition on additions or other requirements.
Intentional deception	Responsibility, actions and intent require additional investigation. A mass spectrum alone identifies neither a perpetrator nor intent.

2. Other unremarkable test results do not remove a confirmed breach

Analytical results must be assessed against their respective detection objectives. An unremarkable sugar profile does not answer a sequence-specific question about a protein. An adequate diastase number does not automatically identify the enzyme responsible for the activity. Several unremarkable results therefore do not constitute a vote that cancels out an independently substantiated, relevant foreign-enzyme finding. The comparability of analytical questions, sensitivity and sample identity must be considered. [7, 9, 16]

3. Suitability for food use does not permit addition to honey

Regulation (EC) No 1332/2008 on food enzymes expressly leaves specific EU rules for individual foods unaffected. The possible authorisation of an enzyme in other applications does not override the specific prohibition on additions to honey. Nor does the category baker's honey permit enzyme or syrup additions; its quality exceptions address different matters. [2, 6]

GHIC conclusion

Robust evidence of an unauthorised enzyme introduction provides an independent basis for a finding of non-compliance. This must be distinguished from the broader task of establishing how every constituent entered the product.

ASSESSMENT OF THE FOODQS STATEMENT

Where GHIC agrees and what needs clarification

This assessment refers to the FoodQS article *Proteomics in honey analysis - What can the method contribute to authenticity testing?* of 10 September 2026. The left column briefly summarises the limitations discussed; the right column presents GHIC's scientific and legal assessment. [1]

Point raised by FoodQS	GHIC assessment
No universal standalone test	Correct. Comprehensive authenticity assurance and evidence of a particular breach are different analytical tasks. A positive finding that is robust for its intended purpose may be decisive.
Refined syrups without detectable protein markers	This limits what a negative foreign-enzyme test can exclude. It does not refute a positive finding for a protein that is present and has been identified with sufficient specificity.
Traces from bee feeding are possible	A relevant alternative explanation that must be examined against the marker, its level and documented beekeeping practice. A general possibility does not, by itself, explain a finding in a particular batch.
Consider amount and the overall findings	Agreed. Qualitative identification, semiquantitative signal assessment and validated concentration measurement must be distinguished. A positive finding alone does not establish an exact amount of enzyme or syrup.
Broad reference data are needed for bee protein levels	Agreed. Natural variation in a bee protein is particularly relevant to rules that flag unusual quantities. It does not automatically undermine the established identity of a different, specifically investigated foreign protein.
Complement established methods	A complementary method can provide the decisive finding in an individual case. The detection objective and evidential strength matter, rather than the order in which methods became established.

The outstanding question of supporting data

The article presents neither quantitative feeding experiments nor marker-specific discrimination thresholds. This does not mean that relevant data are unavailable elsewhere. A robust explanation that resolves concerns about particular samples must make clear which data support it. [1]

GHIC therefore considers comparisons under controlled conditions necessary: verified authentic honeys, documented feeding conditions, natural microbial sources where relevant, and appropriate reference enzymes or syrups used for technical purposes. Such comparisons are needed to assess whether the observed signature falls within a plausible background range or supports an unauthorised introduction. The same requirement applies to conclusions both for and against non-compliance. [8, 12]

The standard for this discussion

Methodological limitations must be related to the conclusion actually claimed. The limitations of a negative finding are not evidence against a specific positive finding.

SCIENTIFIC BASIS

Why protein detection is analytically powerful

1. Enzyme identity can be determined analytically

In suitable LC-MS/MS methods, proteins are extracted from the honey matrix and digested into peptides under controlled conditions. Chromatographic separation, precursor-ion masses and characteristic fragment ions together provide information about the amino acid sequence. With sufficiently discriminating peptides, an enzyme can be assigned to a biological source. Taxonomic resolution must reflect the actual specificity: sometimes a species, sometimes only a genus or protein group. [7, 8, 9]

This approach can target known foreign enzymes. However, an untargeted research dataset and a validated targeted routine test are different procedures. Performance must be demonstrated for the particular target protein, matrix, sample preparation, instrument and data analysis. Sequence databases and suitable control honeys remain part of the scientific foundation of targeted tests as well. [7, 8, 10]

2. Activity and protein identity are different measurands

The conventional total diastase number describes enzymatic activity. It does not automatically distinguish between a bee-derived enzyme and foreign enzymes with similar functions. Specialised activity-based methods can differentiate foreign enzymes, for example after prior separation. The additional strength of mass spectrometry is confirmation based on sequence. [7, 9]

Original study	Relevant evidence and its scope
Erban et al., 2021 [7]	45 honeys; foreign amylases identified in four samples using nanoLC-MS/MS. The study establishes specific protein detection and provides curated sequence information. The sample numbers describe this study; they are neither an EU market prevalence estimate nor a universal measure of error.
Takahashi et al., 2023 [9]	LC-QTOF-MS identified amylases from Aspergillus or Geobacillus in an investigation of 67 retail samples. Adapted native PAGE with activity staining produced concordant findings. This supports the detection principle through a second analytical approach; assignment was at genus level.

3. Inactive enzymes can also leave detectable traces

Denaturation can alter an enzyme's three-dimensional structure and activity while identifiable peptide sequences remain. Proteomics may therefore still detect such inactive enzymes under suitable conditions. It is not, however, independent of processing: chemical modifications, degradation, glycation, extraction losses and altered enzymatic cleavage can impede detection. Detectability must be assessed for the specific method. [10, 13]

Precision principle: detection of a protein and demonstration of an active enzyme are different conclusions. A proteomics finding does not automatically establish current enzymatic activity in the product.

ALTERNATIVE ROUTES OF INTRODUCTION

Feeding and the microbiome require specific investigation

Natural microbial contributions are a real consideration

Honey is produced within a biological system. Not every protein of non-bee origin is therefore an unauthorised addition. Wang et al. (2025) isolated *Bacillus subtilis* from nectar, honey sacs and freshly collected comb material. Culture and feeding experiments support a bacterial contribution to amylase activity. The comb material was collected after four to six hours. The study therefore did not investigate the detection of specific foreign-enzyme patterns associated with technical use in mature retail honey. [12]

This study calls for careful marker selection and source assessment. It does not explain every amylase pattern in retail products. Evidence concerning one species must not simply be extended to homologous enzymes of other species: a shared peptide is not species-specific evidence.

The overall pattern can strengthen source assessment

Erban et al. (2026) specifically expanded their database search to include microbial proteomes. The accompanying pattern expected from broader contamination with whole organisms was absent in the samples examined; this supported the interpretation that the foreign enzymes occurred in isolation. This strengthens the evidence in those cases. The absence of additional proteins does not absolutely exclude natural inputs without considering detection limits, sample preparation and previous microbial processes. [8]

Carry-over from feeding: a hypothesis with testable predictions

Feed carry-over must be assessed against the specific marker and production conditions. GHIC recommends the following controlled comparisons and case assessment. These are proposed requirements, not claims that the relevant experiments have already been completed:

Area to examine	Information required
Feed and exposure	Feed product, enzymes, amount used, feeding dates and the analytically tested feed batch.
Beekeeping practice	Honey super management, interval before nectar flow and harvest, transfer from stores, controls and independent colonies.
Analytical comparison	The same markers and assessment method, order of magnitude, recovery, blanks, variability and authentic reference honeys.
Explanation of the case	Agreement of enzyme pattern and amount with controlled observations; examination of plausible alternatives.

Confirmed feed carry-over may change the assessment of causes and responsibility. It does not automatically resolve product compliance. Feed introduced in substantial amounts or harvested together with honey does not become honey as defined in Annex I merely through contact with bees. Low unavoidable traces require separate assessment. The Honey Directive contains no general numerical tolerance for traces detected by proteomics that replaces this assessment. [2, 11]

No blanket reversal of the burden of proof: an unresolved route of introduction remains unresolved. Neither an unconfirmed explanation offered to dispel concerns nor a failure to respond proves compliance or intentional fraud.

BEE-DERIVED PROTEINS

Quantitative profiles complement specific foreign-enzyme detection

Informative research evidence with clear limits

Takahashi et al. (2025) developed an LC-MS/MS method for quantifying bee-derived α-glucosidase III (HBG-III). Concentrations in 104 authenticated honeys from 16 countries and 23 nectar sources ranged from 11.5 to 69.7 mg/kg. For this method, the reported limit of quantitation was 1.9 mg/kg, recoveries were 73.8-89.2%, and within-laboratory reproducibility was 3.9-6.5% RSD. This demonstrates the practical feasibility of validated protein quantification; these figures do not apply generally to proteomics or to other enzymes. [10]

An unusually low bee protein result may be consistent with dilution, processing or an analytical problem. Reference data must be appropriate to the protein, honey type, storage, treatment and sample preparation. The Honey Directive sets no general minimum for total protein or MRJP1. A result below a laboratory's internal reference limit is therefore not automatically an independent breach of the law. [2, 10, 13]

Illustrative calculation: the scope of a quantitative marker

Assumption: a honey contains 30 mg/kg of a bee protein. Mixing equal masses of this honey and a protein-free syrup gives 15 mg/kg. Without knowing the original honey, a single value does not determine the dilution fraction. A protein level that remains plausible does not exclude dilution. This simplified mixing example is not an experimental result.

Bee proteins do not establish the origin of all sugars

In controlled cage experiments, Lewkowski et al. (2019) showed that bees also introduce their characteristic proteins into honey-like products when processing sucrose solutions. The mere presence of a bee proteome therefore does not establish that all sugars in the product examined originated from nectar or honeydew. Additional information is needed to resolve their source. [11]

Distinguish absolute amounts, relative signals and thresholds

Normalising to the same total protein amount before LC-MS measurement initially examines the relative composition of that protein fraction. Without additional quantification, such a profile does not establish the original protein content per kilogram of honey. Peptide standards, too, correct only those steps for which they are suitable; a standard added only after digestion does not account for earlier extraction losses. [8, 10]

The limit of detection, limit of quantitation, laboratory reporting limit and legal decision rule serve different purposes. An exact concentration is not always required to establish identity. However, an argument based on the level of a purported feeding residue requires a robust assessment of quantity. A signal above the detection limit is neither automatically a legally permitted trace nor automatically a prohibited addition.

GHIC treats an unusual quantitative result and the sequence-specific identity of a foreign protein as distinct types of evidence. Their combination can strengthen interpretation; both require appropriate controls.

OFFICIAL PRACTICE AND QUALITY OF FINDINGS

Proteomics is already available for official honey controls

A publicly documented application

The current CAI accreditation certificate **434/2026, dated 17 September 2026**, expressly includes the identification of non-bee amylases in honey by proteomic LC-MS/MS in the scope of SZPI laboratory **1058.2** in Prague: **item 2.7, method B/11, honey matrix**. The entry is on page 22 of the annex, corresponding to PDF page 23 including the cover page. The certificate replaces 399/2026. This evidence concerns the specified scope; it does not establish accreditation for every conceivable proteomics claim. [14]

On 16 June 2026, SZPI publicly reported two honey batches with confirmed foreign amylases and announced administrative proceedings and an AAC notification. The practical use of the method in official controls is therefore documented. The publication does not establish a final, legally binding outcome of the proceedings or universal freedom from analytical error. [15]

Distinguish validation, accreditation and harmonisation

Validation demonstrates fitness for a defined purpose. Accreditation assesses laboratory competence within a specified scope. Harmonisation establishes common rules. Article 34 of the Official Controls Regulation provides for a hierarchy of methods; subject to the conditions laid down there, this also permits appropriately developed methods validated through within-laboratory or interlaboratory studies in accordance with internationally accepted scientific protocols. Official analyses are also subject to requirements for laboratory designation and accreditation. The absence of EU-wide harmonisation alone does not establish that a method is generally unusable. [4, 17]

GHIC requirement	Purpose
Disclose markers and attribution	Peptides, protein IDs, database version and taxonomic resolution must support the claimed identity; homologous sequences and modifications must be assessed.
Establish signal quality and confirmation	Appropriate peptides, fragment ions, retention times and signal ratios under a validated rule; repeat sample preparation or suitable confirmation for material findings.
Control contamination	Document process and instrument blanks, carry-over, positive controls, matrix effects and recovery as appropriate to the method.
State the decision rule	Report identity, quantitative assessment and the compliance conclusion separately; specify uncertainty and the applicable detection or reporting limits.
Enable independent scrutiny	Safeguard sample identity, raw data, evaluation, retention and access for technical review; enable a second expert opinion under the applicable procedure.

The table sets out GHIC requirements for robust case assessment. A generic method name, general laboratory accreditation or a single peak that cannot be independently assessed is insufficient. A global statistical false discovery rate (FDR) is also not directly transferable to the error rate of a legal classification of honey. [4, 8]

LEGAL ASSESSMENT

Procedural action must reflect the available evidence

Where non-compliance is suspected, Article 137(2) of Regulation (EU) 2017/625 requires an investigation to confirm or eliminate that suspicion. Where non-compliance is established, Article 138 requires remedial action and prevention of further infringements. Depending on the case, measures may include restrictions on or prohibitions of placing products on the market. The competent authority determines an appropriate and proportionate measure. Completion of criminal proceedings is not a general prerequisite. [4]

Evidence available	Appropriate conclusion and response
No target marker detected	No adverse finding within the scope tested. No general certificate of authenticity; protein-free syrups and other infringements remain possible.
Weak or insufficiently confirmed signal	Check identity and controls. No definitive allegation concerning the product or fraud.
Identity confirmed, circumstances of introduction unclear	Investigate specific causes through feeding history, microbiology, processing and additional analyses; document suspicion where specific grounds exist.
Unauthorised enzyme introduction sufficiently established	Identify the specific legal requirement breached and initiate appropriate remedial action. Additional quantification of syrup is not necessarily required.
Additional evidence of intentional deception	Investigate responsibility and possible sanctions separately. Do not infer intent solely from the protein finding.

Food safety and honey compliance require separate assessments. A product need not be harmful to health for its marketing as honey to be unlawful. Conversely, no unsubstantiated health risk may be inferred from a foreign-enzyme finding. Article 19 of Regulation (EC) No 178/2002 is not an automatic recall provision for every authenticity infringement; it is linked to food safety requirements. [2, 5]

State explicitly the scope of the decision

The reasoning should disclose which product requirement has been breached and what supports confidence in that conclusion. A confirmed finding of unauthorised addition may concern a specific batch without establishing conclusions about the entire manufacturer, its entire product range or the intentions of individual persons. The extent of the infringement and responsibility for it must be determined separately. [4]

Practical decision rule

Sufficiently substantiated unauthorised enzyme introduction supports a finding of non-compliance. Where a signal remains unresolved, its significance must first be investigated. Both situations require a documented decision proportionate to the actual evidence.

GHIC CALLS FOR ACTION

Scientific rigour and consistent implementation

GHIC advocates honey controls that systematically use and properly assess targeted protein detection. This requires clear analytical objectives, verifiable laboratory findings and transparent decisions throughout the supply chain.

Authorities: turn specific findings into specific investigations

Where substantial indications exist, the batch concerned and its distribution route must be investigated, suitable sample material secured and a laboratory with the appropriate analytical scope involved. Established infringements must lead to effective remedial action. The prescribed cooperation channels must be used in cross-border cases. A general reference to ongoing method development does not replace examination of the case at hand. [4, 17]

Traders and packers: provide a verifiable account of each batch

Material findings must not be dismissed solely because other types of tests yielded no adverse results. Supply-chain and production records should enable the batch to be explained; where feeding is proposed as an explanation, this includes relevant information on origin and production. Food business operators are responsible for compliance with food law within the activities under their control. [5]

Laboratories: make the analytical target and decision rule transparent

Marker identity, source attribution and the legal conclusion should remain distinguishable in the report. Reference honeys, recovery, controls and comparative studies must support the claim made. Explanations supporting and challenging an adverse finding must be assessed against the same scientific standards. Interlaboratory comparisons strengthen the evidence particularly when they use suitable independent samples and predefined assessment criteria.

EU harmonisation: translate existing evidence into common rules

GHIC supports further development of authentic reference collections, investigation of carry-over from feeding and microbial sources, and informative interlaboratory trials. Common criteria should distinguish between markers and analytical objectives. The EU mandate to establish methods for detecting adulterated honey by 14 June 2028 does not suspend existing product requirements and control obligations. [2, 3, 4]

Concluding GHIC position

Proteomics merits an established place in honey control. Its strength lies in the specific, verifiable detection of relevant proteins. Where this reliably establishes unauthorised introduction, the finding must have practical effect in the compliance decision. Scientific rigour and consistent enforcement belong together.

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REFERENCES

Sources and references

[1] FoodQS GmbH
Proteomics in honey analysis - What can the method contribute to authenticity testing?
10 September 2026. Original statement; the company's own account of the method and its limitations.
foodqs.de · Original article dated 10 September 2026

[2] European Union
Directive 2001/110/EC relating to honey
Consolidated version of 14 June 2026. In particular Article 1, Article 2, point 1, Article 4 and Annexes I and II. The consolidated text is a documentation aid; the texts published in the Official Journal are authoritative.
EUR-Lex · CELEX 02001L0110-20260614

[3] European Union
Directive (EU) 2024/1438
Amends, among other instruments, the Honey Directive. Article 1: mandate to establish methods; Article 5: application from 14 June 2026; Article 6: transitional provision. Does not legalise previously prohibited additions.
EUR-Lex · CELEX 32024L1438

[4] European Union
Regulation (EU) 2017/625 on official controls
In particular Articles 34, 35, 37, 137 and 138 and Annex III. The original text and the current consolidated version of 5 January 2025 were consulted for the relevant provisions.
EUR-Lex · CELEX 02017R0625-20250105

[5] European Union
Regulation (EC) No 178/2002
Version of 1 January 2026. In particular Articles 16–19: presentation, responsibility, traceability and obligations linked to food safety.
EUR-Lex · CELEX 02002R0178-20260101

[6] European Union
Regulation (EC) No 1332/2008 on food enzymes
Article 2(3)(a): specific EU rules for individual foods remain unaffected; Article 3(2)(a): enzymes used for technological purposes.
EUR-Lex · CELEX 32008R1332

[7] Erban T, Shcherbachenko E, Talacko P, Harant K
A single honey proteome dataset for identifying adulteration by foreign amylases and mining various protein markers natural to honey
Journal of Proteomics 239 (2021), 104157. Primary publication; the abstract and published methodological information were reviewed.
DOI: 10.1016/j.jprot.2021.104157 · PubMed abstract

[8] Erban T et al.
Mining foreign proteins in honey by shotgun label-free proteomics: Implications for quality and authenticity
Journal of Proteomics 328 (2026), 105657. Peer-reviewed publication; the authors' full text was reviewed. In particular, methods, Section 3.1 and source attribution of foreign proteins.
DOI: 10.1016/j.jprot.2026.105657

[9] Takahashi Y, Yoshida I, Yokozeki T, Igarashi T, Fujita K
Investigation of Foreign Amylase Adulteration in Honey Distributed in Japan by Rapid and Improved Native PAGE Activity Staining Method
Journal of Applied Glycoscience 70 (2023), 67–73. Publisher's full text; foreign amylases and comparison of LC-QTOF-MS with adapted native PAGE.
DOI: 10.5458/jag.jag.JAG-2023_0002

REFERENCES

Sources and references

[10] Takahashi Y, Yoshida I, Yokozeki T, Hirakawa Y, Fujita K
Development of an LC-MS/MS Method for Quantitation of Western Honeybee (Apis mellifera) α-Glucosidase III as a Potential Honey Authenticity Marker
Journal of Applied Glycoscience 72 (2025), 7202106. Publisher's full text; validation, authenticated honeys and limitations of the HBG-III marker.
DOI: 10.5458/jag.7202106

[11] Lewkowski O, Mureșan CI, Dobritzsch D, Fuszard M, Erler S
The Effect of Diet on the Composition and Stability of Proteins Secreted by Honey Bees in Honey
Insects 10 (2019), 282. Controlled cage experiments using sucrose solutions; relevance to the scope of conclusions that can be drawn from bee-derived protein signatures.
DOI: 10.3390/insects10090282 · Full text in the university repository

[12] Wang M, Zhao W, Zhou D, Huang J
Bacillus subtilis Contributes to Amylase Production in the Honey Sac of Apis mellifera
Insects 16 (2025), 221. Full text of the primary publication; culture and feeding experiments. Does not provide general evidence for markers of industrial enzymes in mature retail honey.
DOI: 10.3390/insects16020221

[13] Paget BW et al.
Quantitative comparison of manuka and clover honey proteomes with royal jelly
PLOS ONE 18 (2023), e0272898. Publisher's full text; protein profiles and possible effects of chemical changes on peptide detection.
DOI: 10.1371/journal.pone.0272898

[14] Český institut pro akreditaci (CAI)
Accreditation certificate 434/2026 for SZPI Laboratory 1058.2, Prague
17 September 2026; replaces 399/2026. Annex p. 22/40, item 2.7: B/11, identification of non-bee amylases in honey by proteomic LC-MS/MS. PDF page 23 when the cover page is included.
cai.cz/OA/pdf/434_2026_CS.pdf

[15] Státní zemědělská a potravinářská inspekce (SZPI)
The Food Inspection Authority detected adulterated honey
Official press release, 16 June 2026. Two batches containing foreign amylases; administrative proceedings and AAC notification announced. The procedural status must not be equated with a final, legally binding outcome.
szpi.gov.cz · Press release dated 16 June 2026

[16] European Commission / Joint Research Centre
Methods for verifying honey authenticity
Knowledge4Policy. Overview of substance-specific markers and fingerprinting methods. Does not constitute explicit EU validation of a particular honey proteomics method.
knowledge-for-policy.ec.europa.eu · Overview of methods

[17] European Commission / DG SANTE
Legislation on official controls
In particular, the sections Official Laboratories and Sampling, Analysis, Tests and Diagnosis. Official explanation of the hierarchy of methods and laboratory requirements.
food.ec.europa.eu · Official controls

Public sources were researched and checked on 5 October 2026 for the statements they support. Statutory requirements, published research, laboratories' own statements and GHIC's conclusions are distinguished in the text. Quantitative values and sample sizes apply only to the studies specified. This statement makes no new case-specific determination concerning named commercial products.