Authent-Net Member State (MS) National Status Report

Country: Czech Republic

Please note that the information provided here below will be put on the Food Authenticity Research Network Hub (FARNH) which will be publically accessible. So please do not include any confidential information.

List of organisations that fund food anti- fraud/food authenticity research and the type of research they fund

Please provide a list of organisations (Government + NGO whatever the nationality) that are funding projects on food authenticity in your MS

1. Name (Categorise into government/NGO, public/public-private)
Address
Web site link
Short description of the funder
Type of research funded: APPLIED RESEARCH/DEVELOPMENT
Click here to privately contact the persons responsible for Food Authenticity funding.
(This would take you to a secure location [eg. LinkedIn private chat] to contact relevant funder, only once you're able to prove that you are from another funding organisation).

1. Ministry of Agriculture of the Czech Republic (Government, public)
Tesnov 17, 117 05, Prague 1
e-mail: info@mze.cz
http://eagri.cz/public/web/en/mze/
http://eagri.cz/public/web/en/mze/consultancy-research/

The Department of Research, Training and Consultancy
National Agency for Agricultural Research (NAZV)
Contact person : Jana Slaba, e-mail: jana.slaba@mze.cz, phone no.: +420 221 812 107
Research, Education and Consultancy Dept.
Contact person : Pavlina Adam, e-mail: pavlina.adam@mze.cz

Type of research funded: APPLIED RESEARCH/DEVELOPMENT
The Ministry of Agriculture is the central public administrative authority for agriculture, the water sector and the food processing industry, and for forestry, game management, hunting and fishing. The Ministry is also the central public administrative authority for commodity exchanges which organise trade in goods originating from agricultural and forestry production. In addition to this, it acts as the central public administrative authority for veterinary and phytosanitary services, food safety and quality management, the prevention of cruelty to animals, and protection of rights in regard to new varieties of plants and breeds of animals. The Ministry of Agriculture is in charge of the Czech Agricultural and Food Inspection Authority, the State Veterinary Administration of the Czech Republic, the State Phytosanitary Administration of the Czech Republic, the Central Institute for Supervising and Testing in Agriculture and the Czech Breeding Inspection Authority.

The Ministry of Agriculture manages R&D for the entire agricultural sector, and invests significant funding into its support and development. Thanks to this funding, the results produced by some Czech research teams rank them among the best in their field both in Europe and worldwide.
SCIENCE AND RESEARCH
The Ministry of Agriculture conceptually and methodologically manages departmental organisations engaged in research. It is responsible for the implementation of the National Research Policy and the National Innovation Strategy at the Ministry, prepares a Concept for Research and Development within the Ministry's field of competence and ensures that it is implemented, and draws up a list of priorities for national and international programmes dealing with the issues of agricultural research, development and innovation. The Ministry also coordinates collaboration in the area of ministerial R&D&I within the Czech Republic, and the involvement of the ministerial scientific research teams in European research projects.

2. Ministry of Education, Youth and Sports (Government, public)
Karmelitska 529/5
118 12 Prague 1, Czech Republic
e-mail: info@msmt.cz;
a range of contact persons for individual types of calls
http://www.msmt.cz/index.php?lang=2

National support for Research and Development: http://www.msmt.cz/vyzkum-a-vyvoj-2/pro-odborniky

Support for international cooperation in Research and Development:
http://www.msmt.cz/vyzkum-a-vyvoj-2/podpora-mezinarodni-spoluprace-ve-vavai

Type of research funded: BASIC/EXPERIMENTAL/APPLIED RESEARCH/DEVELOPMENT

The Ministry of Education, Youth and Sports is the central organ of the state administration for preschool facilities, school facilities, elementary schools, secondary schools and higher education institutions, for scientific policy, research and development, including international cooperation in this area, and for scientific titles, for state care for children, youth, physical education, sport, hiking and the sport representation of the state.

The Central Administrative Office Responsible for Research and Development ensures mainly:
a) the preparation of the National Research and Development Policy of the Czech Republic in accordance with international treaties and the monitoring of its implementation in the form of positions on the compliance of the programmes of research and development presented by the providers with the National Research and Development Policy of the Czech Republic before these programmes are approved by the Government;
b) the preparation of the priorities in the form of the National Research Programme;
c) the implementation of the priorities of research in the areas that are not within the scope of the activities of the providers in the form of ensuring parts of the National Research Programme;
d) the preparation of the legal regulations on research and development and the evaluation of the consequences of other legal regulations on research and development;

e) international cooperation of the Czech Republic in research and development, including meetings with the organs and institutions of the European communities and the individual member states active in research and development, with the exception of international cooperation in defence research and development, for which the Ministry of Defence is responsible.
(3) When the representation of the Czech Republic in the relevant international organs and organisations is ensured by the Ministry, it presents a report to the Government on the course and results of the cooperation after discussion with the Research and Development Council and publishes the report after it has been discussed by the Government.
(provisions of Section 33 of Act No. 130/2002 Coll., On Research and Development Support from Public Funds and on the Amendment of Some Related Acts (Act on Research and Development Support)

3. The Ministry of Industry and Trade (Government, public)
Na Frantisku 32, Praha 1, 110 15
mailto:posta@mpo.cz
http://www.mpo.cz/en/ ; http://www.mpo.cz/en/business/support-for-research-and-development/
LinkedIn: https://www.linkedin.com/company/ministry-of-industry-and-trade-of-the-czech-republic/

Type of research funded: INDUSTRIAL/EXPERIMENTAL/APPLIED RESEARCH/DEVELOPMENT

Ministry of Industry and Trade is a central government body for economic and trade policy, issues of small and medium-sized enterprises and trades, energy and raw materials state policy and the coordination of foreign trade policy of the Czech Republic.

4. GACR (Czech Science Foundation) (Government, public)
Evropska 2589/33b, 160 00, Praha 6
e-mail: info@gacr.cz
https://gacr.cz/en/

Type of research funded: BASIC RESEARCH/DEVELOPMENT
The Czech Science Foundation (also known as the Grant Agency of the Czech Republic, GA CR) was established in 1993 as the main independent public organization with the aim to support basic research in the Czech Republic and promote international collaboration of researchers and research teams on the bilateral and multilateral levels.
On the basis of calls for proposals, the Czech Science Foundation provides financial support for experienced as well as young and early-stage researchers. Moreover, it funds bilateral projects together with projects carried out within international research programmes. The subject of a project proposal is determined by the applicant (bottom-up principle).
Around 2,500 project proposals are submitted to the GA CR every year, of which more than one-fourth obtain financial support. The GA CR invites proposals in all disciplines of basic research.

5. TA CR (Technology Agency of the Czech Republic) (Government, public)

Evropska 1692/37
160 00 Praha 6
e-mail: info@tacr.cz
https://www.tacr.cz/index.php/en/

Type of research funded: EXPERMENTAL/APPLIED RESEARCH/DEVELOPMENT

The Technology Agency of the Czech Republic is an organizational unit of the state that was founded in 2009 by the Act No. 130/2002 Coll. on the support of research, experimental development and innovation. The creation of TA CR is one of the cornerstones of the fundamental reforms in research and development (R&D) in the Czech Republic. The key features of the reform are the redistribution of financial support from the national budget. The Technology Agency of the Czech Republic simplifies the state support of applied research and experimental development which has been fragmented and implemented by many bodies before the reform.

Plan/Strategy in terms of Authenticity Research Funding

Please provide a web link to a plan/strategy on food authenticity for each specific funding organisation (see 1st box), provided there is one, or anything the funding organisations are able to provide (general plan/strategy on food). That should include policy documents, research/surveillance documents where possible.

Funding organisation name + web link to plan + Key decision making committees

Plan/Strategy by institution numbered according to the previous list of funding bodies.

1. Ministry of Agriculture of the Czech Republic
http://eagri.cz/public/web/en/mze/subsidies/
Concept and strategy:
http://eagri.cz/public/web/en/mze/consultancy-research/
http://eagri.cz/public/web/mze/poradenstvi-a-vyzkum/vyzkum-a-vyvoj/koncepce-a-strategie/

2. Ministry of Education, Youth and Sports
International cooperation in research and development
http://www.msmt.cz/vyzkum-a-vyvoj-2/podpora-mezinarodni-spoluprace-ve-vavai?lang=1

3. The Ministry of Industry and Trade
http://www.mpo.cz/en/business/support-for-research-and-development/the-new-program-trio--160149/

4. GACR (Czech Science Foundation)
https://gacr.cz/en/about-gacr

5. TA CR (Technology Agency of the Czech Republic)
https://www.tacr.cz/index.php/en/

Capabilities/Infrastructure of Authenticity research providers/relevant NRLs

Please provide details of national capabilities (public and private) in terms of food authenticity analysis (relevant National Reference Laboratories, certified laboratories etc.) and in terms of Food Authenticity Research.

1. Name (Categorise into academic/research, general proficiency, expertise in a specific technique and/or commodity)
Address
Web site:
Contact available through: *(Any web sites where contact details of key personnel are available)*
Telephone:

ACADEMIC:
1. University of Chemistry and Technology, Prague
Metrological and Testing Laboratory, Department of Food Analysis and Nutrition
Address: Technicka 5, Prague 6, 166 28
Web site: http://www.vscht.cz/testing-laboratory; http://uapv.vscht.cz/

RESEARCH INSTITUTES:
2. Bee Research Institute
Address: Maslovice – Dol 94, Libcice nad Vltavou
Web site: http://www.beedol.cz/

3. Veterinary Research Institute
Address: Hudcova 70, Brno
Web site: https://www.vri.cz/

4. Institute of Animal Science
Address: Pratelstvi 815, Praha - Uhrineves
Web site: http://www.vuzv.cz/

5. State Veterinary Institute
Address: Sidlistni 21, Prague 6; Contact : Jan Rosmus, jan.rosmus@svupraha.cz
Web site: https://www.svupraha.cz/

Address: Jakoubka ze Stribra 462/1, Olomouc
Web site: http://www.svuolomouc.cz/index.php?nid=8804&lid=en&oid=1771240

Address: Rantiovska 93/20, Jihlava
Web site: http://www.svujihlava.cz/?jazyk=en

NATIONAL REFERENCE LABORATORIES:
6. National Reference Laboratory (NRL) for Food Additives
Address: Srobarova 48, Praha 10

Web site: http://www.szu.cz/nrl-pro-aditiva-v-potravinach
Contact: Daniela Winklerova, tel.: +420 26708 2341

7. National Reference Laboratory (NRL) for Microbiology of Food, Items of Current Use and Indoor Environment
Address: Srobarova 48, Praha 10
Web site: http://www.szu.cz/nrl-pro-mikrobiologii-potravin-pbu
Contact: RNDr. Vladimír Špelina, CSc. E-mail: vspel@szu.cz

8. National Reference Laboratory (NRL) for Genetically Modified Food
Address: Srobarova 48, Praha 10
Web site: http://www.szu.cz/narodni-referencni-laborator-pro-geneticky-modifikovane
Contact: V. Ostry, Tel./Fax: +420 541211764, Tel.: +420 515577523

NATIONAL CONTROL BODIES:
9. Czech Agriculture and Food Inspection Authority (CAFIA)
National contact point for Assistance and Cooperation System (AACS) in Europe that supports and and facilitates communication among control authorities that are involved in the fight against food fraud in Europe.
Directorate: Kvetna 15, 603 00 Brno
Web site: http://www.szpi.gov.cz/en/default.aspx
Contact: Petr Cuhra (director of Prague inspectorate), Za Opravnou 300/6, 150 00 Prague 5, Petr.Cuhra@szpi.gov.cz ; tel: +420 257 199 511

10. Customs Technical Laboratories
Address: Budejovicka 7, Praha 4
Web site: https://www.celnisprava.cz/cz/o-nas/nase-ukoly/Stranky/celne-technicke-laboratore.aspx

LABORATORIES:
11. EUROFINS CZ, s.r.o.
Address: Podebradska 56, Praha 9
Web site: http://www.eurofins.cz/

12. ALS Czech Republic
Address: Na Harfe 9, Praha 9
Web site: http://alsglobal.cz/

13. BUREAU VERITAS CZECH REPUBLIC, spol. s r.o.
Address: Beranovych 130, Praha 9
Web site: http://www.bureauveritas.cz/

14. EKOCENTRUM OVALAB, s.r.o.
Address: Martinovska 3248/166, Ostrava – Martinov
Web site: http://www.ekocentrum.net/

Recent key Cases/Reports/Reviews (after 2010)

Please provide a list of web links to public outputs, documents, papers, reports, databases on incidents, detection methods, ... in relation to food authenticity your MS is involved (see T1.1)

1. Title + web link

Key information to be registered/extracted on/ from the Authent-Net Documents database (FARNHub)

1. Food Pillory
Portal on poor-quality, adulterated and dangerous food on the market operated by the Czech Agriculture and Food Inspection Authority (CAFIA)
http://www.potravinynapranyri.cz/
A range of cases for various products reported by CAFIA.

2. Food Safety Information Centre
http://www.foodsafety.cz/

3. Methanol affair
https://en.wikipedia.org/wiki/2012_Czech_Republic_methanol_poisonings
http://byznys.ihned.cz/zpravodajstvi-cesko/c1-57577550-z-ceska-se-nesmi-dostat-ani-kapka-alkoholu-ministr-zdravotnictvi-zakazal-jeho-vyvoz

Scientific papers on food authentication (published by UCT Prague):

Rubert J., Lacina O., Zachariasova M., Hajslova J.: *Saffron authentication based on liquid chromatography high resolution tandem mass spectrometry and multivariate data analysis.* Food Chem. 204: 201–209 (2016). (doi:10.1016/j.foodchem.2016.01.003i)

Hrbek V., Ovesná J., Demnerová K., Hajšlová J.: *Využití superkritické fluidní chromatografie pro lipidomické profilování sójového a kravského mléka: Autenticita a detekce falšování.* Chemické listy (2015) 109: 518-526. (pdf)

Rubert J., Lacina O., Fauhl-Hassek C., Hajslova J.: *Metabolic fingerprinting based on high resolution tandem mass spectrometry: a reliable tool for wine authentication?* Anal. Bioanal. Chem. (2015) 406: 6791–6803. (doi: 10.1007/s00216-014-7864-y).

Vermeulen P., Nietner T., Haughey S. A., Yang Z., Tena N., Chmelarova H., van Ruth S., Tomaniova M., Boix A., Han L., Elliott C. T., Baeten V., Fauhl-Hassek C.: *Origin authentication of distillers' dried grains and solubles (DDGS)—application and comparison of different analytical strategies.* Analytical and bioanalytical chemistry (2015), 407, Issue 21, 6447–6461. (doi: 10.1007/s00216-015-8807-y).

Hrbek V., Ovesná J., Demnerová K., Hajšlová J.: *Lze využít metabolomické profilování pro autenticitu geneticky modifikované sóji?: pilotní studie.* Chem. Listy, (2014) 108: 875-881. (pdf)

Hrbek V., Vaclavik L., Elich O., Hajslova J.: *Authentication of milk and milk-based foods by direct analysis in real time ionization–high resolution mass spectrometry (DART–HRMS) technique: a critical assessment.* Food Control (2014) 36:138–145. (doi: 10.1016/j.foodcont.2013.08.003).

Cajka T., Danhelova H., Zachariasova M., Riddellova K., Hajslova J.: *Application of direct analysis in real time ionization–mass spectrometry (DART–MS) in chicken meat metabolomics aiming at the retrospective control of feed fraud.* Metabolomics (2013) 9:545–557. (doi: 10.1007/s11306-013-0495-z).

Cajka T., Danhelova ., Vavrecka A., Riddellova K., Kocourek V., Vacha F., Hajslova J.: *Evaluation of direct analysis in real time ionization–mass spectrometry (DART–MS) in fish metabolomics aimed to assess the response to dietary supplementation.* Talanta (2013) 115: 263-270. (doi:10.1016/j.talanta.2013.04.025).

Vaclavik L., Ovesna J., Kucera L., Hodek J., Demnerova K., Hajslova J.: *Applic.ation of ultra-high performance liquid chromatography–mass spectrometry (UHPLC–MS) metabolomic fingerprinting to characterize GM and conventional maize varieties.* Czech J. Food Sci. (2013), (pdf).

Novotná H., Kmiecik O., Galazka M., Krtková V., Hurajová A., Schulzová V., Rembialkowska E., Hajšlová J: *Metabolomic fingerprinting employing DART-TOFMS for authentication of tomatoes and peppers from organic and conventional farming.* Food Addit. Contam. A (2012) 29:1335–1346. (doi:10.1080/19440049.2012.690348).

Vaclavik L., Schreiber A., Lacina O., Cajka T., Hajslova J: *Liquid chromatography–mass spectrometry-based metabolomics for authenticity assessment of fruit juices.* Metabolomics (2012) 8:793–803. (doi: 10.1007/s11306-011-0371-7).

Cajka T., Riddellova K., Tomaniova M., Hajslova J.: *Ambient mass spectrometry employing a DART ion source for metabolomic fingerprinting/profiling: a powerful tool for beer origin recognition.* Metabolomics (2011) 7:500–508. (doi: 10.1007/s11306-010-0266-z).

Vaclavik L., Hrbek V., Cajka T., Rohlik B.-A., Pipek P., Hajslova J.: *Authentication of animal fats using direct analysis in real time (DART) ionization–mass spectrometry and chemometric tools.* J. Agric. Food Chem. (2011) 59:5919–5926. (doi: 10.1021/jf200734x).

Vaclavik L., Lacina O., Hajslova J., Zweigenbaum J.: *The use of high performance liquid chromatography-quadrupole time-of-flight mass spectrometry coupled to advanced data mining and chemometric tools for discrimination and classification of red wines according to their variety.* Anal. Chim. Acta (2011) 685:45–51. (doi: 10.1016/j.aca.2010.11.018).

Cajka T., Riddellova K., Tomaniova M., Hajslova J.: *Recognition of beer brand based on multivariate analysis of volatile fingerprint.* J. Chromatogr. A (2010) 1217:4195–4203. (doi: 10.1016/j.chroma.2009.12.049).

Cajka T., Riddellova K., Klimankova E., Cerna M., Pudil F., Hajslova J.: *Traceability of olive oil based on volatiles pattern and multivariate analysis.* Food Chem. (2010) 121:282–289. (doi: 10.1016/j.foodchem.2009.12.011).

Cajka T., Hajslova J., Pudil F., Riddellova K.: *Traceability of honey origin based on volatiles pattern processing by artificial neural networks.* J. Chromatogr. A (2009) 1216:1458–1462. (doi: 10.1016/j.chroma.2008.12.066).

Vaclavik L., Cajka T., Hrbek V., Hajslova J.: *Ambient mass spectrometry employing direct analysis in real time (DART) ion source for olive oil quality and authenticity assessment.* Anal. Chim. Acta (2009) 645:56–63. (doi: 10.1016/j.aca.2009.04.043).

Grégrová A., Čížková H., Mazáč J., Voldřich M.: Authenticity and quality of spirit vinegar: Methods for detection of synthetic acetic acid addition. Journal of Food and Nutrition Research. 51, 123-131 (2012)

Šnebergrová J., Čížková H., Rajchl A., Ševčík R., Voldřich M.: Evaluation of aroma restoration of apple and orange juices from concentrates in the Czech Republic. Journal of Food and Nutrition Research, 51 (3), 156-163 (2012).

Grégrová A., Čížková H., Bulantová I., Rajchl A., Voldřich M.: Characteristics of Garlic of the Czech origin. Czech Journal of Food Sciences, 31, 581-588 (2013).

Rajchl A., Čížková H., Ševčík R., Jodasová A., Voldřich M.: Analytical data for plum paste as a tool for evaluation of plum paste authenticity. Journal of Food and Nutrition Research, 52, 71-77 (2013).

Grégrová A., Neradová E., Kružík V., Mazáč J., Havelec P., Čížková H.: Determining adulteration of canned products using SNIF-NMR and IRMS: detection of undeclared addition of synthetic acetic acid. Eur. Food Res. Tech. 239, 169-174 (2014). (doi: 10.1007/s00217-014-2209-9)

Škorpilová T., Šimoniová A., Rohlík B., Pipek P.: Differentiation between Fresh and Thawed Chicken Meat by the Measurement of Aconitase Activity. Czech J. Food Sci. 32, (5) (2014) 509–513 ISSN 1212-1800. IF 0,741

Rajchl A., Prchalova J., Kružík V., Ševčík R., Čížková H.: Evaluation of ice-tea quality by DART-TOF/MS. J. Mass Spectrom. 50, 1214-1221 (2015). (doi: 10.1002/jms.3639)

Hurkova K., Rubert J., Stranska-Zachariasova M., Hajslova J.: *Strategies to Document Adulteration of Food Supplement Based on Sea Buckthorn Oil: a Case Study*. Food Analytical Methods, in press. (doi: 10.1007/s12161-016-0674-4)

Ongoing Projects (after 2010) including national-international/public-private funded projects)

Please provide a list of ongoing projects on food authenticity your MS is involved in (see T1.1)

1. Name, funding, start/end date + Web site link

Key information to be registered/extracted on/from the Authent-Net Documents database (FARNHub)

1. FoodIntegrity (Ensuring the Integrity of the European food chain), EU FP7, 2014-2018, http://www.foodintegrity.eu

2. QSAFFE (Quality and SAfety of Feeds and Food for Europe), EU FP7, 2011-2014, http://www.qsaffe.eu/

3. Authent-Net (AUTHENT-NET – Food Authenticity Research Network), EU H2020, 2016-2018, http://www.authent-net.eu

4. AuthenticFood (Fast methods for AUTHENTICation of organic plant based FOODs), ERA–NET–CORE ORGANIC II, 2011-2014, http://www.coreorganic2.org/

5. FoodFraud (Complex strategies for effective detection of food fraud in the chain production-consumer), Ministry of Agriculture of the Czech Republic, 2015-2018, https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&ss=detail&n=0&h=QJ1530272

6. Methods for identification, traceability and authentication of food and feed components of animal origin, Ministry of Agriculture of the Czech Republic, 2015-2018, https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&ss=detail&n=0&h=QJ1530107

7. Prague University Analytical Centre II and III - NPU 2015-2020, Ministry of Education, Youth and Sports, 2015-2020, https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&ss=detail&n=0&h=LO1601

8. Methods and criteria for verifying the authenticity of food and food ingredients, Ministry of Agriculture of the Czech Republic, 2009-2013, https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&ss=detail&n=0&h=QI91B283

9. Metabolomic fingerprinting and profiling as a tool for authentication and detection of saffron adulteration, Ministry of Education, Youth and Sports**,** 2012 – 2015, https://www.rvvi.cz/cep?s=rozsirene-vyhledavani&ss=detail&n=0&h=LD12035

10. Diagnostic methods for laboratory control of poppy authentication, Ministry of Agriculture of the Czech Republic, 2017 – 2019, https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&ss=detail&n=0&h=QK1720263

Legal framework for food authenticity (in application at a national level)

Please provide a list of standards/regulations on food authenticity applied in your MS (see T1.2)

1. Title + web link

Key information to be registered/extracted on/from the Authent-Net Documents database (FARNHub)

1. Act no. 110/1997 Coll. on food and tobacco products

http://eagri.cz/public/web/mze/legislativa/pravni-predpisy-mze/tematicky-prehled/Legislativa-MZe_uplna-zneni_zakon-1997-110-viceoblasti.html

Existing indicators used: intelligence sources

Please provide a list of intelligence tools used to detect/counter food fraud issues in your member state (e.g. Horizon Scanning, Interpol, Europol, National Crime agencies)

1. Title + web link

Key contacts:

1. Food Pillory
Portal on poor-quality, adulterated and dangerous food on the market operated by the Czech Agriculture and Food Inspection Authority (CAFIA)
http://www.potravinynapranyri.cz/

2. Food Safety Information Centre
http://www.foodsafety.cz/

3. Czech Agriculture and Food Inspection Authority
http://www.szpi.gov.cz/en/default.aspx

Commodities/products of interest and type of research of interest

1. Commodities/products of interest

Please provide a list of the commodities/food products in priority order most important for each MS in terms of value to that country.

1) Honey

2) Wine

3) Meat

4) Fish

5) Cereals

6) Poppy

7) Food supplements

2. Type of research of interest

Please provide a list of type of research (e.g. criminology, critical points, historical points, analytical methods, consumer behaviour, economic aspects) in priority order most important for each MS in terms of value to that country).

1) Analytical methods

2) Control systems and fraud prevention

3) Consumer education

The National Research and Innovation strategy for smart specialization Czech Republic (National RIS3 strategy)
Web site: http://www.vyzkum.cz/FrontClanek.aspx?idsekce=741706

Concept of research, development and innovation of the Ministry of Agriculture for the years 2016-2022
Web site:
http://eagri.cz/public/web/file/461417/Koncepce_vyzkumu__vyvoje_a_inovaci_Ministerstva_zemedelstvi_na_leta_2016_2022.pdf

VII. 6. New methods to analyze the composition of food raw materials, food and properties
The research will involve primarily analytical methods, chemical, physico-chemical and microbiological and molecular genetics to be used for evaluating the quality of food (e.g. their falsification, authenticity, etc.), and their safety and further for process control or for control by authorized institutions in favour of the consumer. The research is directed into the following areas:
a) indirect methods for monitoring of food quality,
b) database of methods for food authentication,
c) methods for the determination of selected food allergens,
d) systems for quality and safety control,
e) the development of selected rapid detection methods for physical, chemical, biological and microbiological feed and food contamination,
f) monitoring of substances in the food chain – link food and farming practices,
g) development of analytical methods based on principles of instrumental analysis, particularly chromatography and spectral analysis,
h) development of microbiological and molecular biology methods for detection, identification and quantification of pathogenic, technologically undesirable and culture microorganisms,
i) consumer education in knowledge on commodities and a healthy diet.