

ACEF/1314/12972 — Parecer do RIES sobre intenção de decisão

Parecer da Instituição de Ensino Superior à Intenção de Decisão do Conselho de Administração

1. Tendo em conta a intenção de decisão do Conselho de Administração relativamente ao ciclo de estudos Tecnologia dos Alimentos
2. conferente do grau de Mestre
3. a ser leccionado na(s) Unidade(s) Orgânica(s) (faculdade, escola, instituto, etc.) Instituto Superior de Engenharia (UAlg)
4. da(s) Instituição(ões) de Ensino Superior / Entidade(s) Instituidora(s) Universidade Do Algarve
5. O responsável da instituição de ensino superior decide: Apresentar parecer
6. Parecer (Português):
Ver ficheiro em anexo.
7. Documento anexo (Português e Inglês, PDF, máx. 100kB): (impresso na página seguinte)

Anexos

Processo n.º ACEF/1314/12972

Instituição de Ensino Superior: Universidade do Algarve (UAIG)

Unidade Orgânica: Instituto Superior de Engenharia (ISE)

Ciclo de estudos: Tecnologia de Alimentos

Grau: Mestre

Assunto: Intenção de Decisão do CA – ACEF/ 1314/ 12972

PARECER

O Instituto Superior de Engenharia (ISE) da Universidade do Algarve (UAIG) recebeu a Intenção de Decisão do Conselho de Administração (CA) da A3ES relativo ao processo ACEF/ 1314/ 12972, tendo o Departamento de Engenharia Alimentar (DEA) apreciado aquela intenção de decisão tomada com base no Relatório Final elaborado pela Comissão de Avaliação Externa (CAE). À intenção de decisão do CA de acreditar o ciclo de estudos por um período de 1 ano com condições, ainda que em discordância desfavorável com a CAE, vimos prestar os seguintes esclarecimentos.

Relativamente à condição de «implementar alterações ao plano curricular» no prazo de 1 ano, o DEA havia já na resposta à decisão de apresentação de pronúncia concordado com o teor das recomendações e propostas de melhoria, condições e fundamentação para acreditação constantes no relatório preliminar da CAE e decidido criar um grupo de trabalho constituído pela direção do departamento, direção do ciclo de estudos e pelo(a)s coordenadores das áreas disciplinares/ científicas para rever os objetivos das UC's, os respetivos conteúdos programáticos e metodologias de ensino-aprendizagem e a bibliografia no sentido de responder à CAE relativamente à organização das UC's e, eventualmente, propor UC's que contribuirão para o enriquecimento curricular do plano de estudos.

Mais, e ainda no contexto do(s) comentário(s) constantes do relatório preliminar da CAE para melhorar o plano de estudos, designadamente quando se particularizaram necessidades de formação em áreas temáticas específicas, o DEA esclareceu na pronúncia que os alunos têm a possibilidade de frequentar UC's opcionais em qualquer área científica (QAC), designadamente no âmbito das Opções 2 e 4 do plano curricular, para além daquelas oferecidas pelo DEA num dado ano letivo/ edição do curso, por forma a completarem a formação na(s) área(s) que lhes interessam. Julgamos que, em parte, as lacunas identificadas pela CAE no Guião de autoavaliação no que toca às eventuais incoerências e/ou carência de informação acerca das UC's opcionais – e que sustentam, também, a sugestão de revisão do plano de estudos – estão relacionadas com aquela possibilidade. No âmbito do processo de revisão do plano estudos (v. acima), aquela possibilidade será, com certeza, objeto de reflexão.

No que concerne à condição de, no prazo de 3 anos, «criar condições para melhorar a componente de investigação científica ou de atividades de desenvolvimento profissional de alto nível do corpo docente», o relatório preliminar da CAE reconheceu que:

- *Os membros do corpo docente são academicamente qualificados e cumprem os requisitos exigidos pela legislação e tem a competência académica e experiência de ensino adequadas aos objetivos do ciclo de estudos. De facto, 9 dos 10 docentes envolvidos no ciclo de estudos possuem grau de doutor e estão em regime integral (§4.1.9);*
- *Os docentes estão envolvidos em atividades de investigação que procuram dar satisfação a solicitações de entidades exteriores à instituição e que se enquadram nos objetivos deste ciclo de estudos (§4.1.10). No Guião para a autoavaliação (§7.2.5) destacam-se alguns dos projetos financiados (FCT, POCTI, PTDC, AGRO, QREN) em que os docentes se envolveram, nomeadamente:*
 - ISEKI Food, 2, 3 and 4 (104934-CP-1-2002-1-PT-ERASMUS-TN, 226032-CP-1-2005-1-PT-ERASMUS-TN, 142822-LLP-1-2008-PT-ERASMUS-ENW and 518415-LLP-1-2011-1-IT-ERASMUS-ENW)
 - ISEKI Mundus, Mundus 2 (136263-EM-1-2007-1-PT-ERA MUNDUS-EM4EATN, 145585-PT-2008-ERAMUNDUSEM4EATN)
 - HORTOCON (POCTI/43624/BIO/2000)
 - SWEET.COM (POCTI/EQU/49194/2002)
 - EMERCON (AGRO 822)
 - Avaliação da Qualidade Biológica e Caracterização Nutricional de Azeitona de Mesa Britada da Variedade Maçanilha (QREN 23736).
 - Novas abordagens para o controlo da contaminação por microrganismos patogénicos e aumento da segurança e qualidade em fruta fresca cortada (PTDC/AGR-ALI/111687/2009)
 - NITROLINKS (PTDC/MAR/70247/2006)
 - Estudio de la trazabilidad sensorial de los aceites elaborados en el SO de la Península Ibérica (Coop Transf ES-PT0432_I2TEP_5_E)
 - Melhoramento das plantas e da qualidade dos produtos de *Arbutus unedo* para o sector agro-florestal (PTDC/AGRFOR/3746/2012).

A atividade de investigação da maioria dos docentes revela-se interessante e é desenvolvida em Centros de Investigação e projetos financiados pela FCT e pelo QREN, nalguns casos com envolvimento dos alunos do ciclo de estudos (§7.2.7). No Guião para a autoavaliação (§7.2.1) indicam-se os Centros de Investigação devidamente reconhecidos na área científica predominante do ciclo de estudos que os docentes integram nomeadamente CIQA, CCMAR, CEER, CIEO, CIMA e CBME/IBB, dois dos quais com classificação de Excelente;

- *A instituição dispõe de recursos humanos e organizativos para a realização de investigação, e possui uma experiência acumulada de investigação (por si ou através da colaboração em instituições de investigação) com número significativo de publicações em revistas e conferências internacionais incluindo publicações que resultam dos trabalhos finais dos alunos (cf. §7.2.7). No Guião para a autoavaliação (§7.2.2-7.2.3), e reportando-se ao período em análise (i.e. 2008-2013), os docentes publicaram 41 artigos em revistas internacionais com revisão por pares, 22 capítulos de livros, 11 artigos em atas de*

conferências nacionais/internacionais com revisão por pares (v. lista de publicações no final deste documento).

O DEA assim como os membros do corpo docente envolvidos no ciclo de estudos permanecem empenhados em continuar a desenvolver as suas atividades de I&DT, cuja importância está devidamente reconhecida nos regulamentos de avaliação de desempenho do pessoal docente da UAIG e consta do plano de desenvolvimento científico do Instituto Superior de Engenharia (ISE), unidade orgânica da UAIG na qual o DEA está integrado, aprovado recentemente pelo Conselho Técnico-Científico do ISE. Naquele Plano preconizam-se estratégias e algumas medidas que certamente contribuirão para «melhorar a componente de investigação científica ou de atividades de desenvolvimento profissional de alto nível do corpo docente». A concretização, sob a forma de resultados esperados, das atividades de ID&T foi objeto de reflexão tanto ao nível do departamento como da unidade orgânica e está, em parte, vertida nos regulamentos de avaliação de desempenho mencionados acima. Atendendo à importância, reconhecida por todos, das atividades ID&T, às propostas e aos projetos de ID&T financiados e às publicações em revistas e conferências internacionais que se concretizaram após o período em avaliação (viz 2008-2013), a melhoria da «componente de investigação científica [e] de atividades de desenvolvimento profissional de alto nível do corpo docente» está assegurada no período de 3 anos que se preconiza na Intenção de Decisão do CA.

Neste contexto, o ISE considera, ainda, que estão garantidos os pressupostos necessários para a acreditação do ciclo de estudos por um período superior a 1 ano ainda que condicionada à implementação de alterações do plano de estudos no prazo de 1 ano.

A Direção do Ciclo de Estudos

TO WHOM IT MAY CONCERN

The Institute of Engineering (ISE) of the University of Algarve (UAIG) received the decision intention of the A3ES Management Board (MB) on the process ACEF/ 1314/ 12972, having the Department of Food Engineering (DEA) analyzed the decision intention of A3ES MB taken in consideration the Final Report prepared by the External Assessment Team (EAT). The MB's decision (intention) to "accredit [the course of study for a period of 1 year] with conditions, [although] in unfavorable disagreement with EAT", deserves comment from the DEA.

On the need to "implement changes to the study plan" within one year, the DEA had already agreed in response to the decision, although partially, with the content of the recommendations and proposals for improvement, conditions and justification for constant accreditation in the EAT's preliminary report and decided to create a working group set up by the head of the department, board of the study cycle and the coordinators of scientific areas to review the goals of the units, the respective syllabus and teaching methods-learning and references in order to answer the EAT regarding the organization of units and, eventually propose units that contribute to the enrichment of the curriculum.

Moreover, and still in the context(s) of the comment(s) listed in EAT's preliminary report to improve the curriculum, particularly when detailed training needs in specific subject areas, the DEA stated that students have the opportunity to attend optional units in any scientific area (SA), particularly in the context of Options 2 and 4 of the curriculum, in addition to those offered by the department in a given school year/ course edition, in order to complete the training in area(s) of their interest. We believe that, in part, the flaws identified by EAT in the self-assessment guide with respect to any inconsistencies and/or lack of information regarding the optional units- and that support, also, the syllabus revision suggestion - are related to that possibility. Under the study plan review process (see above), that possibility will be, of course, object of reflection.

With regard to the condition to, within three years “create conditions for improving the scientific research or high level professional activities components of the teaching staff”, the preliminary report of EAT recognized that:

- The teaching staff is academically qualified and meets the law requirements and has the academic skills and appropriate teaching experience to the objectives of the course. In fact, 9 in 10 teachers have a PhD and are full time (§4.1.9);
- The teaching staff is involved in research activities that seek to satisfy the requests from entities outside the institution and that fit in the objectives of this study cycle (§4.1.10). In the *Guião para a autoavaliação* (§7.2.5) some funded projects (FCT, POCTI, PTDC, AGRO, QREN) in which teachers were involved are highlighted, namely:
 - ISEKI Food, 2, 3 and 4 (104934-CP-1-2002-1-PT-ERASMUS-TN, 226032-CP-1-2005-1-PT-ERASMUS-TN, 142822-LLP-1-2008-PT-ERASMUS-ENW and 518415-LLP-1-2011-1-IT-ERASMUS-ENW)
 - ISEKI Mundus, Mundus 2 (136263-EM-1-2007-1-PT-ERA MUNDUS-EM4EATN, 145585-PT-2008-ERAMUNDUSEM4EATN)
 - HORTOCON (POCTI/ 43624/ BIO/ 2000)
 - SWEET.COM (POCTI/ EQU/ 49194/ 2002)
 - EMERCON (AGRO 822)
 - Evaluation of the Biological Quality and Nutritional Characterization of Crushed Table Olives of Maçanilha Variety (QREN 23736).
 - New approaches for controlling contamination by pathogenic microorganisms and increasing safety and quality in fresh cut fruit (PTDC/AGR-ALI/ 111687/ 2009)
 - NITROLINKS (PTDC/ MAR/ 70247/ 2006)
 - Study of sensory traceability of oils made in the southwest of the Iberian Peninsula (Coop Transfront ES-PT 0432_I2TEP_5_E)
 - Improvement of plants and quality of *Arbutus unedo* products for the agro-forestry sector (PTDC/ AGRFOR/ 3746/ 2012)

The research activity of the majority of the teaching staff reveals to be interesting and is developed in research centers and projects funded by FCT and QREN, in some cases with involvement of students from the study cycle (§7.2.7). In the *Guião para a autoavaliação* (§7.2.1), a list of the research centers duly recognized in the main scientific area of the study cycle that teachers integrate is provided, namely CIQA, COMAR, CEER, CIEO, CIMA e CBME/ IBB – two of which classified as Excellent;

- The institution has the human and organizational resources to carry out research, and has an accumulated experience of research (by its own or by participation in research institutions) with a significant number of publications in international journals and conferences including publications resulting from the students' final works (cf. §7.2.7). In the *Guião para autoavaliação* (§7.2.2-7.2.3), that considers the years 2008-2013, a total of 41 papers in peer-reviewed international journals, 22 book chapters, and 11 publications in the national/ international conferences proceedings are reported (a list is included at the end of this document).

The DEA as well as the teaching staff involved in the study cycle, most integrated in research centers, are committed continuing to develop R&D activities, which importance is recognized in the teaching performance evaluation regulations and is part of the scientific development plan of the Institute of Engineering (ISE), the organic unity of UAIG in which the DEA is integrated, recently approved by the Technical and Scientific Council of the ISE. In this document are present strategies and measures that will certainly contribute to “improve the scientific research or high level professional activities components of the teaching staff”. The goal, in the form of expected results, of the R&D activities was object of reflection both at the department level as the organic unit and is, in some way, included in the performance evaluation regulations mentioned above. Given the importance, recognized by all, of the R&D activities, the applications and funded R&DT projects and the publications in international journals and conferences after the period under review (viz. 2008-2013), the improvement «of the scientific research [and] high-level professional activities components of the teaching staff» is assuredly met during the 3-years period recommend by the MB.

In this context, ISE considers that the conditions necessary for the accreditation of the course for a period longer than 1 year is assured even though conditional to the implementation of changes to the study plan within one year.

The Board of the Study Cycle

LISTA DE PUBLICAÇÕES EM REVISTAS INTERNACIONAIS COM REVISÃO PELOS PARES, CAPÍTULOS DE LIVRO E PUBLICAÇÕES EM ATAS DE CONFERÊNCIAS NACIONAIS E INTERNACIONAIS (2008-2013)

LIST OF ARTICLES IN INTERNATIONAL PEER-REVIEWED JOURNALS, BOOK CHAPTERS, AND PUBLICATIONS IN THE PROCEEDINGS OF NATIONAL AND INTERNATIONAL CONFERENCES (2008-2013)

Artigos em revistas internacionais com revisão pelos pares / Papers in International, peer-reviewed scientific journals

1. Alves, M., Gonçalves, T., Quintas, C. (2012). Microbial quality and yeast population dynamics in cracked green table olives' fermentations. *Food Control*, 23(2):363-368.
2. Aníbal, J.; Esteves, E. & C. Rocha (2011). Seasonal variations in gross biochemical composition, percentage edibility, and condition index of the clam *Ruditapes decussatus* cultivated in Ria Formosa (South Portugal). *Journal of Shellfish Research* 30(1): 17-23
3. Anjos, J., Fernandes, C., Quintas, C., Abrunheiro, A., Silva, B., Gow, N., Gonçalves, T. (2013). " $\beta(1,3)$ – Glucan synthase complex from *Alternaria infectoria*, a rare dematiaceous human pathogen". *Medical Mycology*, 50 (7): 716-725 DOI: 10.3109/13693786.2012.675525.
4. Carvalho, L F.; Rocha, C.; Fleming, A.; Veiga-Pires, C. & J. Aníbal (2013) Interception of nutrient rich Submarine Groundwater Discharge seepage on European temperate beaches by the acoel flatworm, *Symsagittifera roscoffensis*. *Marine Pollution Bulletin* 75: 150-156.
5. Chap, J., Jackson, P., Squeira, R., Gaspar, N., Quintas, C., Park, J., Osaili, T., Shaker, R., Jaradat, Z., Hartantyo, S., H., P., Abdullah Sani, N., Estuningsih, S., Forsythe, S J. (2009). International survey of *Cronobacter sakazakii* and other *Cronobacter* spp. in follow up formulas and infant foods. *International Journal of Food Microbiology*, 136, 185-188.
6. Cruz, R.M.S, Vieira, M.C and Silva, C.L.M. (2008). Effect of heat and thermosonication treatments on watercress (*Nasturtium officinale*) vitamin C degradation kinetics. *Innovative Food Science & Emerging Technologies*, 9, 483-488.
7. Cruz, R.M.S, Vieira, M.C and Silva, C.L.M. (2009). Effect of cold chain temperature abuses on the quality of frozen watercress (*Nasturtium officinale* R. Br.). *Journal of Food Engineering*, 94, 90-97.
8. Cruz, R.M.S, Vieira, M.C and Silva, C.L.M. (2009). The response of watercress (*Nasturtium officinale*) to vacuum impregnation: effect of an antifreeze protein type I. *Journal of Food Engineering*, 95, 339-345.
9. Cruz, R.M.S, Vieira, M.C and Silva, C.L.M. (2013). The impact of cold chain temperature abuses on the quality of frozen strawberry (*Fragaria xananassa*). *International Journal of Food Studies*, 2, 60-68. DOI: 10.7455/ijfs/2.1.2013.a5.
10. Cruz, R.M.S, Vieira, M.C, Fonseca, S.C and Silva, C.L.M. (2011). Impact of thermal blanching and thermosonication treatments on watercress (*Nasturtium officinale*) quality: thermosonication process optimisation and microstructure evaluation. *Food and Bioprocess Technology*, 4, 1197-1204.

11. Esteves, E & J.P. Andrade (2008) Diel and seasonal distribution patterns of eggs, embryos and larvae of Twaité shad *Alosa fallax fallax* (Lacépède, 1803) in a lowland tidal river. *Acta Oecologica*, 34, 172-185. DOI: 10.1016/j.actao.2008.05.008.
12. Esteves, E, Pina, T. & J.P. Andrade (2009) Diel and seasonal changes in nutritional condition of the anadromous Twaité shad *Alosa fallax fallax* (Lacépède, 1803) larvae. *Ecology of Freshwater Fishes*, 18, 132-144. DOI: 10.1111/j.1600-0633.2008.00332.x.
13. Fraqueza G., Batista de Carvalho, L.A.E., Marques, P.M., Maia, L., Ohlin, A. C., Casey, W. H. and Aureliano, M. (2012). Decavanadate, decaniobate, tungstate and molybdate interactions with sarcoplasmic reticulum Ca²⁺-ATPase: quercetin prevents cysteine oxidation by vanadate but does not reverse ATPase inhibition. *Dalton Transactions*, 41, 12749-12758.
14. Fraqueza G., Ohlin, A. C., Casey, W. H. and Aureliano, M. (2012). Sarcoplasmic reticulum calcium ATPase interactions with decaniobate, decavanadate, vanadate, tungstate and molybdate. *Journal of Inorganic Biochemistry*, 107, 82-89.
15. Galego LR, Da Silva J.P., Almeida, V.R, Bronze, M.R & Vilas Boas, L (2011). Preparation of novel distinct highly aromatic liquors using fruit distillates, *International Journal of Food Science & Technology*, 46, 67-73.
16. Galego LR, Jockusch S & Da Silva J.P., (2013). Polyphenol and volatile profiles of pomegranate (*Punica granatum* L.) fruit extracts and liquors, *International Journal of Food Science & Technology*, 48, 693-700.
17. Galego, L., Almeida, V., Gonçalves, V., Costa M., Monteiro, I., Matos, F. & Miguel, G. (2008). Antioxidant activity of the essential oils of *Thymbra capitata*, *Origanum vulgare*, *Thymus mastichina* and *Calamintha baetica*, *Acta Horticulturae*, 765, 325-333.
18. Genç, I., Esteves, E, Anibal, J & A. Diller (2013) Effects of chilled storage on quality of vacuum packed meagre fillets. *Journal of Food Engineering* 115: 486-494. DOI: 10.1016/j.jfoodeng.2012.09.007
19. Gonçalves, E.M., Cruz, R.M.S, Abreu, M., Brandão, T.R.S and Silva, C.L.M. (2009). Biochemical and physical changes of watercress (*Nasturtium officinale* R. Br.) during freezing and frozen storage, *Journal of Food Engineering*, 93, 32-39.
20. Gonçalves, S, Quintas C, Gaspar, M. N., Nogueira, J. M. F. & Romano A. (2009). Antimicrobial activity of *Drosophyllum lusitanicum* leaf extract, an endemic Mediterranean insectivorous plant. *Natural Product Research*. 23:3, 219-229.
21. Graça, A., Nunes, C, Quintas, C, Abadias, M., Usall J, Salazar, M. (2012). Efficacy of Electrolyzed Water to Inactivate Foodborne Pathogens on Fresh-Cut Apples. *Acta Horticulturae* 934, 405 - 411.
22. Grevenstuk T., Gonçalves A., Domingos T., Quintas C, van der Hooft J.J.J, Vervoort J, Romano A. (2012). Inhibitory activity of plumbagin produced by *Drosera intermedia* on food spoilage fungi. *Journal of the Science of Food and Agriculture*, 92(8), 1638–1642.
23. Hernández-Díaz, R., Pimentel-González, D.J., Figueira, A. C., Viniegra-González, G., Campos-Montiel, R.G. (2010). Influence of an aerobic fungus grown on solid culture on ruminal degradability and on a mixture culture of anaerobic cellulolytic bacteria. *Journal of Animal Physiology and Animal Nutrition*, 94 (3), 330-337.
24. Manuel Aureliano, Gil Fraqueza, and C. André Ohlin. (2013) Ion pumps as biological targets for decavanadate. *Dalton Transactions*, 42, 11770-11777. DOI: 10.1039/c3dt50462j.

25. Melo J, Schrama D., Andrew P. W., Faleiro, M. L. (2013). Proteomic analysis shows that individual *Listeria monocytogenes* strains use different strategies in response to gastric stress. *Foodborne Pathogens and Disease*, 10(2), 107-119. DOI: 10.1089/fpd.2012.1297.
26. Melo, J., Andrew, P. W., Faleiro, M. L. (2013). Different assembly of acid and salt tolerance response in *Listeria monocytogenes*. *Archives of Microbiology*, 195, 339-348. DOI 10.1007/s00203-013-0878-6.
27. Melo, J., Schrama, D., Hussey, S., Andrew, P.W., Faleiro, M.L. (2013). *Listeria monocytogenes* dairy isolates show a different proteome response to sequential exposure to gastric and intestinal fluids. *International Journal of Food Microbiology* 163, 51-63. DOI: 10.1016/j.ijfoodmicro.2013.03.001.
28. Miguélez, E.; Zumalacárregui, J.M.; Osorio, M.T.; Figueira, A.C.; Fonseca, B.; Mateo, J. (2008). Quality traits of suckling-lamb meat covered by the protected geographical indication “Lechazo de Castilla y León” European quality label. *Small Ruminant Research*, 77, 65-70.
29. Neves, F.I.G, Vieira, M.C, Silva, C.L.M. (2011). Inactivation kinetics of peroxidase in zucchini (*Cucurbita pepo* L) by heat and UV-C radiation. *Journal of Innovative Food Science and Emerging Technologies*, 13, 158–162. DOI: 10.1016/j.ifset.2011.10.013
30. Nunes P. A., Pires-Cabral, P., Guillén, M., Valero, F., Ferreira-Dias, S. (2011) Production of MLM-Type Structured Lipids Catalyzed by Immobilized Heterologous *Rhizopus oryzae* Lipase. *Journal of American Oil Chemists' Society*, 88, 473-480 DOI: 10.1007/s11746-010-1702-y
31. Nunes, P. A., Pires-Cabral, P., Guillén, M., Valero, F., Ferreira-Dias, S. (2009) Production of Low Caloric Structured Lipids Containing Medium Chain Fatty Acids, Catalyzed by Immobilized Heterologous *Rhizopus oryzae* Lipase. *New Biotechnology*, 25, Supplement 1, page S111. DOI: 10.1016/j.nbt.2009.06.391
32. Nunes, P. A., Pires-Cabral, P., Ferreira-Dias, S. (2011) Production of olive oil enriched with medium chain fatty acids catalysed by commercial immobilised lipases. *Food Chemistry*, 127(3), 993-998. DOI: 10.1016/j.foodchem.2011.01.071.
33. Nunes, P. A., Pires-Cabral, P., Guillén, M., Valero, F., Ferreira-Dias, S. (2012) Optimized production of MLM triacylglycerols catalyzed by immobilized heterologous *Rhizopus oryzae* lipase. *Journal of American Oil Chemists' Society*, 88(4), 473-480. DOI: 10.1007/s11746-012-2027-9.
34. Nunes, P.A., Pires-Cabral, P., Guillén, M., Valero, F., Ferreira-Dias, S. (2012). Batch operational stability of immobilized heterologous *Rhizopus oryzae* lipase during acidolysis of virgin olive oil with medium-chain fatty acids. *Biochemical Engineering Journal* 67, 265-268.
35. Oliveira, S.R., Cruz, R.M.S, Vieira, M.C, Silva, C.L.M. and Gaspar, M.N. (2009). *Enterococcus faecalis* and *Pseudomonas aeruginosa* behaviour in frozen watercress (*Nasturtium officinale*) submitted to temperature abuses. *International Journal of Refrigeration*, 32, 472-477.
36. Osorio, M.T.; Zumalacárregui, J.M.; E.A. Cabeza, Figueira, A.; Mateo, J. (2008). Effect of rearing system on some meat quality traits and volatile compounds of suckling lamb meat. *Small Ruminant Research*, 78(1-3), 1-12.

37. Pires-Cabral, P., Nunes, P. A., Ferreira-Dias, S. (2008) Synthesis of low caloric structured lipids by lipase-catalysed interesterification of olive oil with caprylic acid, *Journal of Biotechnology*, 136, Supplement 1, page S736. DOI:10.1016/j.jbiotec.2008.07.1753
38. Rubilar, J.F., Cruz, R.M.S., Khmelinskii I. and Vieira, M.C. (2013). Effect of antioxidant and optimal antimicrobial mixtures of carvacrol, grape seed extract and chitosan on different spoilage microorganisms and their application as coatings on different food matrices. *International Journal of Food Studies*, 2, 22-38. DOI: 10.7455/ijfs/2.1.2013.a2.
39. Rubilar, J.F., Cruz, R.M.S., Silva, H.D., Vicente, A.A., Khmelinskii I. and Vieira, M.C. (2013). Physico-mechanical properties of chitosan films with carvacrol and grape seed extract. *Journal of Food Engineering*, 115, 466-474. DOI: 10.1016/j.jfoodeng.2012.07.009.
40. Salvá, B.K., Zumalacárregui, J.M., Figueira, A.C., Osorio, M.T. Mateo, J. (2009). Nutrient composition and technological quality of meat from alpacas reared in Peru. *Meat Science*, 82, 450-455.
41. Santo, D, Galego, L, Gonçalves, T., Quintas, C. (2012). Yeast diversity in the Mediterranean strawberry tree (*Arbutus unedo* L.) fruits' fermentations. *Food Research International*, 47(1), 45-50.

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