

ENGINEER JOB OPPORTUNITY

Improvement in gas chromatography and aroma extraction technics to increase understanding of palatability

- **Job title** Engineer position in gas chromatography and volatiles compounds extraction
- **Duration** 12 months
- **Location** ONIRIS (national College of Veterinary Medicine, Food Science and Engineering)
Nantes – Géraudière Food Science and Engineering Campus
Research Unit : FLAVOR Team
UMR GEPEA 6144 CNRS
Rue de la Géraudière - BP 82225
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Context of the project and partners' presentation -----

Odor of food products is related to its composition of different volatile compounds. Whereas it remains difficult to understand the interactions between different odor active compounds in human food, it is quite challenging to determine the importance of volatile compounds involved in pet's sensory perception due to their very lower threshold perception of aroma compounds compared to humans.

In this framework, FLAVOUR research team from ONIRIS and a major industrial company have decided to pool their resources and skills in order to establish the link between pet preferences and volatile compounds composition. **A first engineer opportunity for one year (October 2019 – October 2020) is proposed. It will assess the ability of the candidate to continue with a PhD. Indeed, a future thesis topic is already considered between industrial and academic partners.**

The research project will be carried out in the FLAVOUR research team (UMR CNRS 6144 GEPEA – AERES evaluation A+) of ONIRIS (*Nantes Atlantic College of Veterinary Medicine, Food Science and Engineering*) located in Nantes (France). The topics of the FLAVOUR research team are dedicated to the comprehension of the organoleptic characteristics of food products and in particular the study of their aromatic properties. The FLAVOUR research team (comprising 6 lecturers-researchers, 2 research engineers and 3 technicians) is recognized for its work aimed at understanding the impact of the processes on the aroma attributes of food. It thus works on the basis of a double scientific approach combining (i) methodology and sensory characterization of foods and (ii) methodological development and instrumental characterization of volatile compounds responsible for the perceived aroma quality (3 patents). To conduct its research activities, the FLAVOUR research team relies on analytical platform allowing various extraction techniques of volatile compounds and various aromatic extracts analysis techniques (GC-MS, GC-O, GC-InnOscent, Comprehensive 2D-GCxGC/TOF-MS). Recognized for its expertise, the FLAVOUR team actively participates in academic research programs at regional, national and international level (6th and 7th FP) and industrial applied research programs (CIFRE Thesis).

Diana Pet Food is the global leader and pioneer of high value solutions improving pets' well-being and owners' satisfaction. The company provides multiple products and services improving pet food palatability, pet health and pet food protection, and develops innovative scent & care solutions for the pet care market.

Diana Pet Food is part of Diana, a division of the Symrise Group. Several previous research projects clearly demonstrated that pets are very sensitive to different food sensorial attributes. Among all sensorial characteristics, odor is particularly important. Diana PetFood Research Center conducts innovative research program in evaluation of pet olfactive preferences.



Job presentation -----

The purposed research project will be managed in close interaction between industrial partner and ONIRIS. **Integrated in FLAVOUR research team of ONIRIS, the present engineering position will be at the interface of the two partners and will be dedicated to improve the understanding of dry petfood palatability with gas chromatography and aroma extraction analysis.**

The candidate will have in charge to

- ✿ Review and report the literature on extraction techniques of volatile compounds and the evaluation of their analytical and sensorial performances
- ✿ Conduct experimental and methodological investigations aiming to determine the most relevant technique to extract aroma compounds of dry petfoods
- ✿ Organize, plan and manage analytical experiments in interaction with industrial partner staff involved in the project
- ✿ Deliver a report dealing with the different results of the present research project

Candidates profile -----

The position is intended to a master degree in Analytical Separation Science, Analytical Chemistry or Scientific Instrumentation with an engineer or academic background. A master degree in Food Science completed with a master trainee based on the use of gas chromatography coupled to mass spectrometry could also be suitable for success in the position. The applicant must provide skills and technical know-how in volatile compounds analytical chemistry (GC-MS, Olfactometry) and/or extraction techniques of volatile compounds. Knowledge in sensory analysis, statistical analysis and a master trainee performed in collaboration with industry are considered as an advantage. Scientific rigor in data acquisition and data treatment, technical innovation and resourcefulness will be key skills to success in this position. The applicant must be able to work independently, whilst displaying strong interpersonal skills. He/She must also be dynamic, curious and source of proposals. The applicant must have demonstrated excellent proficiency in French and English reporting (writing and speaking).

Planning -----

Interview : end of august – beginning of September 2019

Response : 15th September 2019

Contract start : 1st October 2019

Contact -----

For this **position based in FRANCE (Nantes)**, please send your application (resume + cover letter + master academic results + optional letters of recommendation) to:

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