EPSRC supported EngD project: Methods to Study Hydration of Gums in Toothpaste

Professor Eddie Pelan and Dr Tim Overton, Chemical Engineering, University of Birmingham

Paul Thompson and Venda Porter Maloney, Global Therapeutics Product Development, Colgate-Palmolive, NJ, USA

Tax free bursary of £20,400 p.a plus Fees paid

Hydrocolloids are a critical component in the formation of toothpaste structure. Variations in hydrocolloid raw materials, processing, and interaction with other ingredients in a toothpaste formulation will impact subsequent macro factors including rheology, appearance, mouthfeel, active and flavor delivery, and shelf life stability of the product.

Colgate would like to initiate the sponsorship of an EngD student with the University of Birmingham to increase our knowledge of how hydrocolloid identity, raw material variation, excipient identity and processing can impact the macro factors of novel formulations. We would like to work with an EngD student to develop a deep understanding of the factors which drive formula robustness in these unique toothpastes. At the end of their EngD they should deliver generalizable conclusions to Colgate which will serve as a toolkit for our formulation scientists going forward, as well as contribute solutions to any on-going challenges. Development of new methods to study these effects will be encouraged as part of the student's research and is an area for publication in this research space.

An EngD student is ideal for this project as this research is cross-disciplinary. The student will need to work on chemical reactions and also carry this to product scale up on a production scale. The student will gain product development and plant scale engineering experience. While hydrocolloid research has been conducted for toothpaste, these new systems are unique to Colgate.

If you meet the EPSRC eligibility of at least a 2(i) in (Bio) Chemical Engineering, Chemistry, Physics, Materials or a 2(ii) plus MSc and you are a EU national then please e mail your c.v. to r.w.greenwood@bham.ac.uk

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