Technology search

Alternatives to nitrate / nitrite in meat curing

Client overview

Established food manufacturer and brand owner, of products including cured, chilled meat, was seeking alternatives to traditional curing techniques due to the emergence of research suggesting that the use of nitrates / nitrites can cause potential



health issues. Ingredient and/or process-based solutions were in scope, but must be able to replicate the meat curing process, as well as the sensorial qualities of the end product.

Specifically, the solution should enable one or more of the following: (1) Retention of fibrous texture of cooked meat; (2) Characteristic pinkish colour of cured ham (3) deliver distinctive cured flavour; (4) Food safety / shelf-life stability / prevent production of toxic compounds.



The search

SAL initiated a technology solution finder search to identify nitrite-free solutions that could deliver one or more of the above attributes to a premium ham product. Primary research was used to verify the appropriateness of each technology and its applicability to a premium ham product. Technologies were prioritised in terms of: (a) ability to replicate the sensorial

properties of cured meat (colour, texture, flavour), and (b) applicability to the client's current process / products. The most promising technologies were presented to the client for internal review. Simultaneously, SAL identified several eminent experts / research institutes who could help develop understanding around the physiological and chemical processes associated with curing and/or help evaluate nitrite alternatives. Expert interviews were conducted to confirm expertise, relevant experience, and capabilities, as well as assess interest in working with the client and preferred ways of working.

"...we want to lead in this space, your work will enable that...

...we would never have unearthed so many opportunities without you...

...your findings have helped us upskill..."

Outcome

15 companies and /or experts were progressed for detailed review by the client

Subsequently **3 of the 15 opportunities** presented by SAL were taken forward – two ingredient suppliers and one subject matter expert

A further 2 solutions were selected for testing and remain of interest pending further evaluation



