

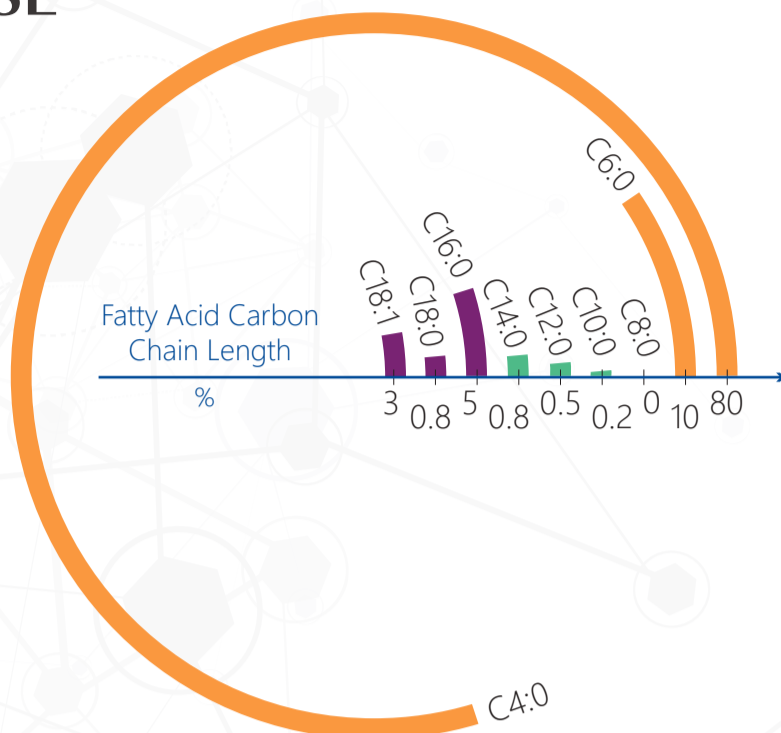
LIPOMOD® 4MDP FOR DAIRY FLAVOUR ENHANCEMENT

Lipomod® 4MDP (L004MDP), is a non-animal lipase that has a high specificity towards short chain fatty acids. L004MDP has been specifically developed to be used in the manufacture of Enzyme Modified Dairy Ingredients (EMDI) including Enzyme Modified Cheese (EMC), lipolysed butter oil (LBO) and accelerated cheese ripening.

HIGH SPECIFICITY LIPASE

This enzyme uniquely produces high levels of short chain fatty acids with very low amounts of medium to long chain fatty acids released from dairy fats. This diagram displays the free fatty acid profile produced when butter oil is hydrolysed with L004MDP.

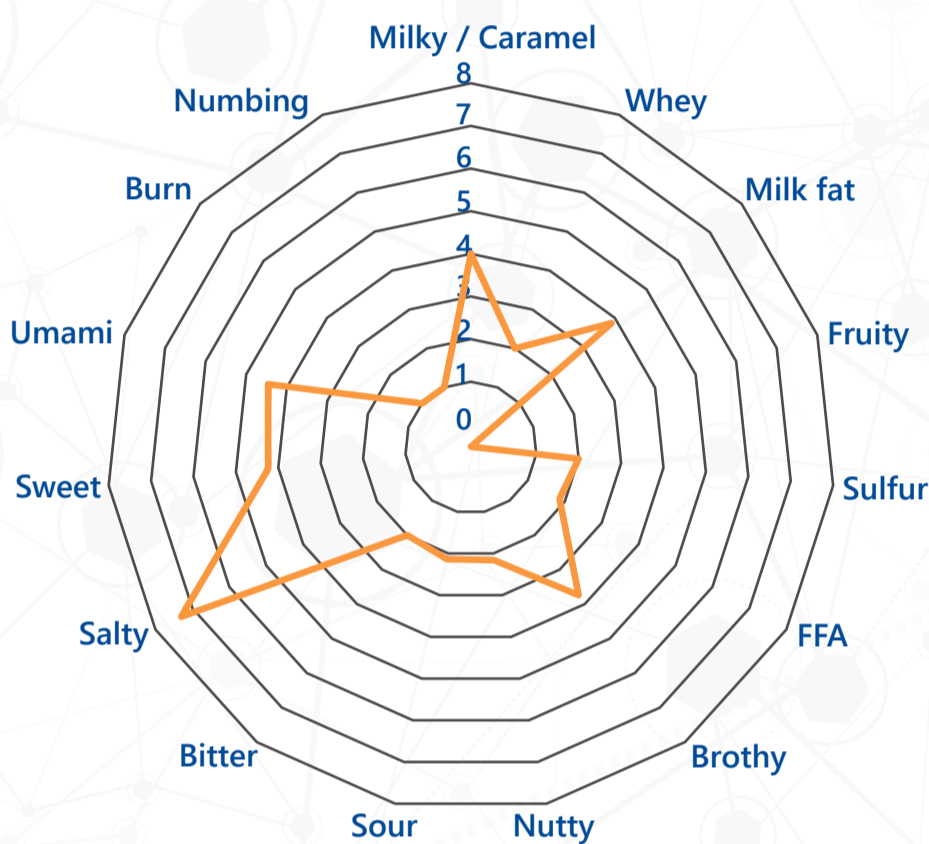
Specifically targeting the release of short chain fatty acids, results in a unique flavour profile that provides a sharp, cheesy, and salty flavour with no bitter or soapy notes. This unique balance of flavour notes is ideal for EMDI's used in crackers, sauces, and processed cheeses to provide a well-rounded and balanced mature cheese flavour.



DAIRY FLAVOUR ENHANCEMENT

Enzymatic hydrolysis of the short chain fatty acids releases butyric and caproic acid that are associated with the production of dairy and cheese-based flavours. The larger volumes of butyric acid released contributes towards a more mature cheese flavour in EMCs.

Enzyme Modified Cheese pastes produced using L004MDP create prominent salty, sweet, umami, brothy, milk fat and milky/caramel flavour notes providing opportunities for developing unique flavour profiles.



THE USE OF ENZYMES FOR FLAVOUR DEVELOPMENT IN EMC

Why Enzyme Modified Cheese?



Enhance

Reduce costs by using enzymes to produce cheese flavours up to 30 times stronger than regular cheese.



Efficiencies

Enzymes can accelerate the ripening of cheese to develop intense dairy flavours within 1-4 days.



Nutrition

A concentrated cheese flavour requires less cheese, thereby reducing fat and sodium content.



Differentiate

EMCs deliver diverse and natural flavour profiles for the food industry allowing your recipes to have a clean label.



Extend

EMC pastes can be dried into an EMC powder to increase its shelf-life and stored at room temperature.

Enzymes Used to Modified Cheese

Dairy substrates contain fats and proteins that can be modified using enzymes to enhance dairy flavours. Combinations of lipases and proteases used to hydrolyse the fats and proteins will depend on the flavour profile needed.

