TO FORK

Quality Meat Scotland

The Maillard Reaction Answers

Answers	
1	Complete the below statement from the following options to explain the Maillard Reaction: Enzyme, Heat, Amino Acid, Sugar, Water, Browning, Colour, Roasting, pH, Time **Protein + Sugar + Heat = Browning + flavour**
2	In what way is the Maillard Reaction different from enzymatic browning? There is no enzyme present in the Maillard Reaction.
3	Describe how the Maillard Reaction is different from caramelisation. Caramelisation describes the chemical reactions that take place when any sugar is heated to the point that its molecules begin to break apart and generate hundreds of new flavour, colour, and aroma compounds. The Maillard Reaction involves sugars and protein (Amino Acids).
4	Look at the two beef joint images below. In which one has the Maillard Reaction occurred most, and why?
	 
	The one on the right. Boiling meat involves water – water is the foe to the Maillard Reaction. It lowers the temperature of the system and minimizes the reaction A simple tip to ensure the Maillard occurs in grilled or roasted meats is to pat the meat dry before cooking, removing any excess moisture/water.
5	List 5 other foods in which the Maillard Reaction takes place. Coffee, Toast, Beer, Roast Chicken, Baked Goods e.g. Cookies, Pastries