## Glossary

- 1. **Oxidation** Oxidation is the loss of electrons or an increase in oxidation state by a molecule, atom, or ion.
- Ester an organic compound made by replacing the hydrogen of an acid by an alkyl or other organic group. Many naturally occurring fats and essential oils are esters of fatty acids.
- 3. Aldehyde group is an organic compound containing a functional group with the structure (CHO), consisting of a carbonyl center (a carbon double-bonded to oxygen) with the carbon atom also bonded to hydrogen and to an R group.
- 4. **Humectant** Substances that prevent the loss of moisture and are hygroscopic in nature.
- 5. **Hydrogenation** is the process where hydrogen atoms bind to the double bond of a compound, facilitating its conversion to a single bond, in the presence of a catalyst
- 6. **Caramelization** is the oxidation of sugar, a process used extensively in cooking for the resulting nutty flavor and brown color. It is one form of non-enzymatic browning.
- 7. **Cyclic compounds** Hydrocarbons in which the two ends of the chain are attached at the ends to form a ring.
- 8. **Condensation** A type of chemical reaction where two molecules combine to form a single molecule with the loss of a small molecule for instance in dehydration reaction, the molecule lost is water.
- Acrylamide- A chemical that can form in some foods during high-temperature cooking processes, such as frying, roasting, and baking. Acrylamide in food forms from sugars and an amino acid that are naturally present in food.
- 10. **Neurotoxicant** Substances that are capable of causing adverse effects in the central and peripheral nervous system, and in sense organs such as dizziness, vertigo, irritability etc.
- 11. **Dextrins** are a group of low-molecular-weight carbohydrates produced by the hydrolysis of starch or glycogen.
- 12. **Osmolality** is a measurement of the total number of solutes in a liquid solution expressed in osmoles of solute particles per kilogram of solvent.

- 13. **Retrogradation** is a reaction that takes place when the amylose and amylopectin chains in cooked, gelatinized starch realign themselves on cooling.
- 14. **Gelatinization** Starch gelatinization is a process of breaking down the intermolecular bonds of starch molecules in the presence of water and heat, allowing the hydrogen bonding sites (the hydroxyl hydrogen and oxygen) to engage more water. This results in irreversibledissolution of starch molecules in water.
- 15. **Baking** Baking is a method of cooking food that uses prolonged dry heat, normally in an oven, but also in hot ashes, or on hot stones.