National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Exemplar for Internal Achievement Standard

Technology Level 3

This exemplar supports assessment against:

Achievement Standard 91619

Demonstrate understanding of the application of a technical area to a specific field

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. It assists teachers to make assessment judgements at the grade boundaries.

New Zealand Qualifications Authority

To support internal assessment

	Grade: Excellence
1.	For Excellence, the student needs to demonstrate comprehensive understanding of the application of a technical area. This involves discussing the feasibility of a future development of the technical area related to the specific field. There is no student work currently available at this grade. A student would typically discuss feasible future applications by considering the impacts of available technologies, the validity of claims, the requirements of legislation, market drivers.

	Grade: Merit
2.	For Merit, the student needs to demonstrate in-depth understanding of the application of a technical area. This involves explaining current limitations and opportunities of the technical area and the potential for future developments in relation to the specific field. There is no student work currently available at this grade. For a foods for health context, for example, a student would typically explain the current limitations and opportunities (such as false beliefs or misconceptions, influence on freedom of choice, current food policies, false product packaging and advertising claims, cost-benefit analysis, consistent supply, further usage-benefit research, etc.) for functional foods in the field of health enhancement and/or disease prevention management and treatment. The new technical developments that they would generally explain are nanotechnologies, micro-encapsulation, and also the application of old technologies to new areas, for example, extraction to incorporate new materials into a food product.

	Grade: Achieved
4.	For Achieved, the student needs to demonstrate understanding of the application of a technical area. This involves: • describing a technical area and its application within a specific field by explaining the technical ideas and developments that created the technical area • describing current limitations and opportunities of the technical area in relation to the specific field. There is no student work currently available at this grade. For a foods for health context (functional foods), for example, the student would typically describe a range of functional foods, such as, yoghurts containing probiotics, folate enhanced bread, calcium enhanced milk, and omega-3 enhanced ice cream. The description would include the nutritional problem and the claim made regarding how the functional food addresses this to enhance health benefits and/or prevent, manage or treat diseases. The student would typically explain the developments that have allowed for the functional ingredients to be included in a food in a form that is stable in the food, released into the body in a controlled manner (controlled delivery systems), masking undesired flavours, and accompanied by the components that are required to carry the nutrients directly where they are needed in the body (food matrix integration). The student will generally describe limitations (such as cost, harmful effects, and attitudes) and opportunities (such as increased understanding, new discoveries, and advances).