Unit Outline 2014
Faculty of Health

Unit Title: Introduction to Food Science
Unit Number: 9279
This Unit Outline must be read in conjunction with:

a) *UC Student Guide to Policies*, which sets out University-wide policies and procedures, including information on matters such as plagiarism, grade descriptors, moderation, feedback and deferred exams, and is available at (*scroll to bottom of page*)

b) *UC Guide to Student Services*, and is available at (*scroll to bottom of page*)

c) Any additional information specified in section 6h.

### 1: General Information

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>1a</strong></td>
<td><strong>Unit title:</strong> Introduction to Food Science</td>
</tr>
<tr>
<td><strong>1b</strong></td>
<td><strong>Unit number:</strong> 9279</td>
</tr>
<tr>
<td><strong>1c</strong></td>
<td><strong>Teaching Period and year offered:</strong> Semester 2, 2014</td>
</tr>
<tr>
<td><strong>1d</strong></td>
<td><strong>Credit point value:</strong> 3</td>
</tr>
<tr>
<td><strong>1e</strong></td>
<td><strong>Unit level:</strong> 1</td>
</tr>
</tbody>
</table>

**1f** Name of Unit Convener and contact details (including telephone and email)

Dr Tanya Lawlis  
Room: 1C124  
Phone: (02) 6206 8711  
Email: Tanya.Lawlis@canberra.edu.au

**1g** Administrative contact details (including name, location, telephone and email)

Mr Marial Kot  
Room: 1C127  
Phone: 6201 2477  
Email: Marial.Kot@canberra.edu.au
2: **Academic Content**

2a **Unit description and learning outcomes**

The unit provides students with an introduction to the topics in Food Science and Technology. Students will explore and gain an understanding into the history of food science and the factors that have shaped food science in Australia; the organisations involved in food regulatory processes and policy development; and consumer attitudes and behaviour towards the topics of food science and technology. This unit will also familiarise students with current food processing and preservation techniques; the requirements for food additives; and food safety and stability.

At the completion of this unit, students will be able to:
1. explain the development of food science in Australia;
2. analyse consumer attitudes and behaviours towards food safety, food processing and preservation techniques;
3. demonstrate an understanding of the food processing and preservation techniques;
4. understand the requirements and policy relating to food additives;
5. apply the food safety standards to specific situations.

2b **Generic skills**

Generic skills developed in this unit include:

1. **Communication**: the ability to present knowledge, ideas and opinions effectively and communicate within and across professional and cultural boundaries
2. **Analysis and Inquiry**: the ability to gather information, and to analyse and evaluate information and situations in a systematic, creative and insightful way
3. **Problem solving**: the ability to apply problem-solving processes in novel situations; to identify and analyse problems and then formulate and implement solutions
4. **Work independently and with others**: the ability to plan their own work, be self-directed, and use interpersonal skills and attitudes to work collaboratively.
5. **Professionalism & Social Responsibility**: The capacity and intention to use professional knowledge and skills ethically and responsibly, for the benefit of others and the environment.

2c **Prerequisites and/or co-requisites**

9280 Introductory Nutrition and students must not be enrolled in or completed 8251 Food Science.

3: **Delivery of Unit and Timetable**

3a **Delivery mode**

This unit is delivered in an on-campus mode with an online component with approximately 3 contact hours per week, consisting of weekly face-to-face lectures and a combination of face-to-face and self-directed/online tutorial or laboratory sessions.

**Face-to-face lectures**: There will be 11 x 1 hour face-to-face lectures. The lectures will be recorded and will be made available on the unit Moodle site after the lecture. In addition, a pdf copy of the lecture slides will be made available on the unit Moodle site prior to the lecture.

**Tutorial/laboratory sessions**: There will be 7 x 2 hour face-to-face tutorial or laboratory sessions and 4 self-directed/online learning tutorial sessions. Instructions for each session will be provided on the unit Moodle site.
### Timetable of activities, such as lectures/ tutorials/ practicals/ field classes, showing key dates and topics

*Information might be provided in the form of a table*

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Laboratory/tutorial session 1</th>
<th>Laboratory/tutorial session 2</th>
<th>Laboratory/tutorial session 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 9.30-10.30 (6C35, weeks 1-7, 10-13)</td>
<td>Monday 10.30-12.30 (12A3, wks 1, 3, 5, 7, 10, 12-13)</td>
<td>Monday 12.30-2.30 (12A3 wks 1, 3, 5, 7, 10, 12-13)</td>
<td>Wednesday 10.30-12.30 (12A3 wks 1, 3, 5, 7, 10, 12-13)</td>
</tr>
</tbody>
</table>

| **Week 1: 11th – 15th August 2014** | **Face-to-face session 1:** Beliefs, behaviours and attitudes Assessment requirements |
| Lecture 1: Introduction to Food Science and Overview of the unit | |

| **Week 2: 18th – 22nd August 2014** | **Self-directed and online learning session 1:** Influence of history on food science Lab Safety | **Online Quiz:** Lab Safety |
| Lecture 2: History of Food Science in Australia | | |

| **Week 3: 25th – 29th August 2014** | **Face-to-face session 2:** HACCP and Lunch Box Test |
| Lecture 3: Food Safety and HACCP | | |

| **Week 4: 1st – 5th September 2014** | **Self-directed and online learning session 2:** Food Labelling and Health Claims How to develop an academic poster | **Online Quiz:** HACCP |
| Lecture 4: Review of Australian food regulations, role of FSANZ | | |

| **Week 5: 8th – 12th September 2014** | **Face-to-face session 3:** Orange juice processing and the impact on Vitamin C concentrations |
| Lecture 5: Food preservation and processing | | |

| **Week 6: 15th – 19th September 2014** | **Self-directed and online learning session 3:** Food fortification Consumer concerns on food processing | **Online post 1** |
| Lecture 6: Food preservation and processing | | |

| **Week 7: 22nd – 26th September 2014** | **Face-to-face session 4:** Mid-semester test (in-class) | **Mid-semester quiz (in-class)** |
| Online Lecture 7: Additives | | |

| **Week 8: 29th September – 3rd October 2014 – CLASS FREE PERIOD** | **Face-to-face session 5:** Food preservation lab: Blanching, Drying, Freezing |
| Lecture 8: Food spoilage | | |

| **Week 9: 6th – 10th October 2013 – PUBLIC HOLIDAY** | Poster |
| No classes this week due to the public holiday | |

| **Week 10: 13th – 17th October 2014** | | |
| Lecture 8: Food spoilage | | |
Week 11: 20th – 24th October 2014

Lecture 9: Food poisoning

Self-directed and online learning session 4:
Food poisoning issues and prevention
Food additives – student views

Online post 2

Week 12: 27th October – 31st October 2014

Lecture 10: Sensory aspects of foods

Face-to-face session 6:
Laboratory 4: Sensory aspects of food

Week 13: 3rd – 7th November 2014

Lecture 11: Review of Unit

Face-to-face session 7:
Tutorial 6: Unit Revision

4: Unit Resources

4a Lists of required texts/readings

There is no specific text for this unit. Relevant chapters from texts, papers and links to appropriate websites will be made available via eReserve on the unit Moodle page.

For Unit readings and resources in the University of Canberra Library
Link to search page for Unit Readings (print materials)
Link to search page for eReserve (electronic materials)

Texts that are available in the library and can be referred to include:


eReserve:

Students will be directed to additional readings on eReserve as required. eReserve can be accessed from the Unit Moodle site: http://learnonline.canberra.edu.au/course/view.php?id=11900.

Useful Websites:

The following websites will also be useful for this unit:

- Food Standard Australia and New Zealand (FSANZ): http://www.foodstandards.gov.au

4b Materials and equipment

Students will require a scientific calculator for the face-to-face sessions. For the laboratory sessions (weeks 3, 5, 10 and 12) protective eyewear and laboratory coats are required, and can be purchased from the newsagency in the hub.
4c  Unit website

To find your unit site online, login to LearnOnline(Moodle) using your student ID. Note that your unit site has a profiles page that displays your name and email address for the benefit of other students. If you prefer to hide your email address, click here for instructions.

5:  Assessment

Some assessments will be moderated, as per the School of Public Health and Nutrition’s Moderation Procedures. A copy of the Moderation Procedures is available in the toolbox on the unit Moodle site.

5a  Assessment overview

<table>
<thead>
<tr>
<th>Assessment item (including exams held in the exam period)</th>
<th>Due date of assignments</th>
<th>Weighting (total to equal 100%)</th>
<th>Addresses learning outcome(s)</th>
<th>Related generic skill(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1 – Quizzes:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a. Lab safety quiz</td>
<td>5pm Friday 22nd August 2014</td>
<td>5%</td>
<td>3,5</td>
<td>1,2,4</td>
</tr>
<tr>
<td>1b. HACCP quiz</td>
<td>Quiz opens: 9am Monday 1st September 2014 Closes: 9am Wednesday 3rd September 2014</td>
<td>10%</td>
<td>5</td>
<td>1,2,3</td>
</tr>
<tr>
<td>1c. Mid-semester quiz</td>
<td>Face-to-face session 4 (week 7)</td>
<td>15%</td>
<td>1,3,5</td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>Assessment 2:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a. Online post 1</td>
<td>5pm Friday 19th September</td>
<td>5%</td>
<td>2,3</td>
<td>1,2,4,5</td>
</tr>
<tr>
<td>2b. Online post 2</td>
<td>5pm Friday 24th October</td>
<td>5%</td>
<td>4</td>
<td>1,2,4,5</td>
</tr>
<tr>
<td>Assessment 3:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scientific poster</td>
<td>Submit on Moodle: 5pm Friday 10th October 2014</td>
<td>20%</td>
<td>3,4,5</td>
<td>1,2,3,4,5</td>
</tr>
<tr>
<td>Assessment 4:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final exam</td>
<td>Examination week</td>
<td>40%</td>
<td>1,2,3,4,5</td>
<td>1,2,3,4</td>
</tr>
</tbody>
</table>

UC Generic Skills
1 - Communication
2 - Analysis and Inquiry
3 - Problem Solving
4 - Working independently and with others
5 - Professionalism and Social Responsibility
Details of each assessment item

Assessment 1: Online quizzes
1a: Lab Safety Quiz

Value: 5%
To be completed by: 5pm Friday 22\textsuperscript{nd} August 2014
Time allocated: 30 minutes

The quiz comprises 15 multiple choice questions and you have 20 minutes to complete. The content of the quiz is based on the accompanying Lab Safety tutorial. The Lab Safety quiz can be accessed from the INTRODUCTION AND HISTORY box on the unit Moodle site. Students MUST attain a minimum of 80\% in the Lab Safety quiz, failure to do so will result in you being excluded from subsequent laboratory sessions (that is Weeks 3, 5, 10 and 12).

1b: HACCP Quiz

Value: 10%
To be completed: online – Quiz will open 9am Monday 1\textsuperscript{st} September 9am and close 9am Wednesday 3\textsuperscript{rd} September
Time allocated: 45 minutes

The aim of the HACCP quiz is to test student’s knowledge in food safety and the HACCP principles. The quiz is based on the Week 3 HACCP lecture and face-to-face session 2. The HACCP quiz is to be completed online and can be accessed from the FOOD SAFETY AND REGULATIONS box on the Moodle site. The quiz will comprise 15 multiple choice and 5 case based short answer questions whereby students will be required to apply their knowledge to HACCP based case scenarios.

Deferred quizzes:

Deferred quizzes will only be granted for a good reason (e.g. illness). Requests should be make directly to the unit convenor, with a copy of the request for a deferred quiz form (copy can be found on the Unit Moodle site) and be accompanied by a medical certificate or other evidence (e.g. letter from a counsellor).

1c: Mid-semester quiz

Value: 15%
Due date: Face-to-face session 4 (Week 7)
Time allowed: 1.0 hour
Materials allowed: scientific calculator and an unannotated English dictionary

The mid-semester quiz covers all information presented in lectures 1-6, face-to-face sessions 1-3 and self-directed online sessions 1-3 and recommended readings from weeks 1 to 6. The mid-semester quiz will comprise a mix of multiple choice and short answer questions. You will be assessed on your knowledge of the first 6 weeks.
Assessment 2: Academic posts (online)

Value: 10% (5% each post)
Due date: Online post 1: 5pm Friday 19th September
Online post 2: 5pm Friday 24th October
Word Limit: no greater than 200 words (not including references)
Submit to: Submit via the relevant discussion board (weeks 6 and week 11)

The purpose of the academic post assessment is for the students to:
- demonstrate an understanding of food processing (in particular mandatory food fortification and food additives);
- communicate a view, supported by evidence, on the fortification of food and the addition of specific substances in food (food additives);
- develop critical analysis skills; and
- develop online etiquette when posting academic material.

For each post a topical issue will be presented in a specific discussion forum. Students are required to communicate their view, in an academic manner, with supporting evidence. Students are also required to compare their view to other viewpoints in the literature and either compare or contrast their view with a peer post.

An example of an academic post will be provided with each topic of discussion.

The marking scheme and expectations for the academic posts can be found at Attachment A.

Assessment 3: Scientific poster

3. Poster

Value: 20%
Due date for electronic copy: 5pm Friday 10th October 2014 (on Moodle)
Word Limit: no greater than 1000 words (not including references)

The purpose of the scientific poster is for the students to:
- demonstrate an understanding of the scientific principles and theoretical background relating to food processing, in particular the impact of processing on the vitamin C content of orange juice;
- demonstrate competence in presenting and interpreting experimental data in food science; and
- develop skills in scientific writing and creating a scientific poster.

The poster is to include an introduction, aim, results, conclusion, discuss the limitations and references. Calculations are to be provided as an attachment to the poster. The poster will also be marked on formatting and logical flow of information.

Instructions on how to develop a poster will be available on Moodle and will be provided as part of the self-directed tutorial session 2. An example of a poster will also be available on Moodle.

The marking scheme and expectations for the poster can be found at Attachment B.
Assessment 4: Final Examination

Value: 40%
Due date: Examination period
Time allowed: 1.5 hours
Materials allowed: scientific calculator and an unannotated English dictionary

The final examination covers all information presented in the lectures, face-to-face and self-directed online sessions and recommended readings from weeks 1 to 13. The final exam will comprise a mix of multiple choice and short answer questions. You will be assessed on your knowledge of the unit and your ability to apply the information to a case scenario or problem-solving situation.

Deferred examinations:
Deferred examinations will only be granted for a good reason (e.g. illness). Requests should be made directly to the examination officer and be accompanied by a medical certificate or other evidence (e.g. letter from a counsellor). Refer to the university policy for guidelines: http://www.canberra.edu.au/student-services/examinations/alternative-exams

Assignment extensions, referencing and late submissions

Repeat students:
Repeat students are required to comply with the unit requirements to pass the unit.

Extension:
Requests for extension based on a good reason such as a medical illness, will only be granted based on evidence from a medical certificate or a counsellor. Evidence along with a copy of the assignment extension form should be submitted to the unit convener prior to the due date of the assessment. If an extension is granted, both the student and the unit convener must sign the extension request form, which sets out the revised conditions. See the unit Moodle site for a copy of the extension request form.

Penalties for late submission of assessment:
Marks will be deducted for an overdue assessment at the rate of 5% of the value of the assignment per day, including weekends. For example if an assessment is worth 40 marks, 2.0 marks will be deducted each day.

Referencing requirements for all assessments:
Students are required to follow the Vancouver referencing style as outlines on Moodle. The Vancouver referencing guide can be accessed from Moodle and the following website: http://www.lib.monash.edu.au/tutorials/citing/vancouver.html.

5c Submission of assessment items

All assessment items will be submitted online via the unit Moodle site. The first page of each assessment submission should include the following information:

Student Name:
Student ID:
Assessment Name:
Word Count (if applicable):
5d **Special assessment requirements**

To pass the unit, students must:
- submit all assessment items;
- attain at least 50% in the final exam; and
- attain at least 50% overall.

5e **Supplementary assessment**

Refer to the UC [Supplementary Assessment Policy](#).

5f **Academic Integrity**

Students have a responsibility to uphold University standards on ethical scholarship. Good scholarship involves building on the work of others and use of others’ work must be acknowledged with proper attribution made. Cheating, plagiarism, and falsification of data are dishonest practices that contravene academic values. Please see UC’s [Academic Integrity Policy](#).

To enhance understanding of academic integrity, it is expected that all students will complete the LearnOnline Academic Integrity Module (AIM) at least once during their course of study. The module is automatically available as a listed site when students log into LearnOnline.

5g **Use of text-matching software**

The University of Canberra has available, through LearnOnline (Moodle), text-matching software that helps students and staff reduce plagiarism and improve understandings of academic integrity. Known as URKUND, the software matches submitted text in student assignments against material from various sources: the internet, published books and journals, and previously submitted student texts. [Click here for further information on the URKUND text-matching software](#).

Students are required to submit their poster through URKUND prior to submission.

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**6: Student Responsibility**

6a **Workload**

The amount of time you will need to spend on study in this unit will depend on a number of factors including your prior knowledge, learning skill level and learning style. Nevertheless, in planning your time commitments you should note that for a 3cp unit the total notional workload over the semester or term is assumed to be 150 hours. These hours include time spent in classes. The total workload for units of different credit point value should vary proportionally. For example, for a 6cp unit the total notional workload over a semester or term is assumed to be 300 hours.

6b **Inclusion and Welfare**

Students who need assistance in undertaking the unit because of disability or other circumstances should inform their Unit Convener or [Inclusion and Welfare](#) as soon as possible so the necessary arrangements can be made.

6c **Participation requirements**
Students are strongly encouraged to attend all lecture and face-to-face tutorial/laboratory sessions and complete all self-directed/online learning activities. If a student does not attend class, it is the responsibility of the student to cover any missed work.

6d **Withdrawal**

If you are planning to withdraw please discuss with your unit convener. Please see Withdrawal of Units for further information on deadlines.

6e **Required IT skills**

Students are expected to submit word processed assignments. Computers are available in building 10 (24 hours/day). Do not submit any or on disc or by email and always keep a backup copy.

6f **In-Unit Costs**

Students will be required to purchase a lab coat, protective eyewear and calculators, all of which can be purchased from the University Newsagency.

(Note: To calculate your unit fees see: How do I calculate my fees? The online UC Co-op Textbook Search is available for purchasing textbooks.)

6g **Work placements, internships or practicums**

There are no work placements, internships or practicums for this unit.

6h **Additional information**

The Faculty of Health Learning Resource Centre provides a mentor, 2 hours per week, to provide assistance to students on assessments, referencing and researching tasks related to this unit (see the Moodle site for the Faculty of Health Learning Resources Centre for further details regarding the mentor sessions).

7: **Student Feedback**

All students enrolled in this unit will have an opportunity to provide anonymous feedback on the unit at the end of the Semester via the Unit Satisfaction Survey (USS) which you can access by logging into MyUC via the UC homepage: http://www.canberra.edu.au/home/. Your lecturer or tutor may also invite you to provide more detailed feedback on their teaching through an anonymous questionnaire. Minor adjustments have been made to the unit based on the 2013 USS comments.

8: **Authority of this Unit Outline**

Any change to the information contained in Section 2 (Academic content), and Section 5 (Assessment) of this document, will only be made by the Unit Convener if the written agreement of Head of Discipline and a majority of students has been obtained; and if written advice of the change is then provided on the unit site in the learning management system. If this is not possible, written advice of the change must be then forwarded to each student enrolled in the unit at their registered term address. Any individual student who believes him/herself to be disadvantaged by a change is encouraged to discuss the matter with the Unit Convener.
### Attachment A: Marking scheme for Academic posts

<table>
<thead>
<tr>
<th>Section</th>
<th>Expectation</th>
<th>HD</th>
<th>DI</th>
<th>CR</th>
<th>P</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and awareness of topic (2 marks)</td>
<td>Accurate and in-depth knowledge and awareness of the topic under discussion.</td>
<td>The student has shown a high level and comprehensive understanding and awareness of the topic under discussion.</td>
<td>The student has shown a good understanding and awareness of the topic under discussion.</td>
<td>The student has shown a conceptual understanding and awareness of the topic under discussion.</td>
<td>The student has shown a limited understanding and awareness of the topic under discussion.</td>
<td>There are indications that the student does not understand or is aware of the topic under discussion.</td>
</tr>
<tr>
<td>Communication of view and analysis in terms of the literature (4 marks)</td>
<td>View is clearly articulated and is supported with literature. Contrasting viewpoints are considered and analysed in terms of the students view.</td>
<td>View is clearly articulated and is supported with literature. Multiple contrasting viewpoints are considered and supported by literature.</td>
<td>View is articulated with the ideas flowing in a logical manner. Ideas presented are mostly supported with literature. Multiple contrasting viewpoints are considered and supported by literature.</td>
<td>View is adequately articulated so that it is easy to read, however, the ideas presented are moderately supported with literature. 1-2 contrasting viewpoints are considered and supported by literature.</td>
<td>View is not clearly articulated and jumps around. The students view is partially supported with relevant literature. One contrasting viewpoint is considered and supported by literature.</td>
<td>View is not supported with the literature Contrasting viewpoints are not considered.</td>
</tr>
<tr>
<td>Relative literature sourced and referenced</td>
<td>Only primary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>Primary sources are mostly used. Lecture and tutorial notes are not used as a source.</td>
<td>A 50/50 mix of primary-secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>Only secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>There are no references to support information.</td>
<td></td>
</tr>
<tr>
<td>Analysis of view in relation to peer posts (1 mark)</td>
<td>Student view is compare/contrasted to a peer post. Relevant literature to support compare/contrast.</td>
<td>High level comparison/contrast with peer review post and literature has been used to support.</td>
<td>Good comparison/contrast with peer review post and literature has been used.</td>
<td>Adequate comparison/contrast with peer review post and literature has been used.</td>
<td>Limited comparison/contrast with peer review post – literature has not been used.</td>
<td>No comparison or contrast to a peer post has been made.</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Academic writing skills (3 marks)</td>
<td>Adhered to English conventions using appropriate vocabulary, grammar, punctuation, paragraphs, syntax and spelling. Academic language/terms are used. Does not exceed in word count. Sources are referenced correctly as per the Vancouver style.</td>
<td>Expectations are met.</td>
<td>Expectations are mostly met. There are very few grammatical errors. Information is presented in a concise manner. Academic language/terms not used on a few occasions. Does not exceed word count. Sources are referenced correctly as per the Vancouver style.</td>
<td>Expectations are mostly met. There are very few grammatical errors. Information is mostly presented in a concise manner. Academic language/terms sometimes used. There are up to 5 grammatical errors (spelling/punctuation etc). Does not exceed word count. Vancouver style is partially used.</td>
<td>Half of the expectations are met. Information is presented not concise manner. Academic language/terms rarely used. There are up to 5 grammatical errors (spelling/punctuation etc). Does not exceed word count. Vancouver style is partially used.</td>
<td>Did not follow English conventions. The post is &gt;10% over the word limit. The Vancouver referencing style has not been used.</td>
</tr>
</tbody>
</table>

Australian Government Higher Education (CRICOS)
Registered Provider number: #00212K
**Attachment B: Marking scheme for Poster:**

<table>
<thead>
<tr>
<th>Section</th>
<th>Expectation</th>
<th>HD</th>
<th>DI</th>
<th>CR</th>
<th>P</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction (3 marks)</strong></td>
<td>This section provides information relating to the:</td>
<td>The student has shown a high level and comprehensive understanding and knowledge in terms of:</td>
<td>The student has shown a good understanding and knowledge of:</td>
<td>The student has shown a conceptual understanding of:</td>
<td>Limited information is provided on:</td>
<td>Does not mention 2 or more of the following:</td>
</tr>
<tr>
<td>different orange juice processing techniques – and the impact of these on the macro/micro nutrients in orange juice</td>
<td>different orange juice processing techniques – and talks about the impact of processing on the nutritional composition of orange juice.</td>
<td>different orange juice processing techniques with some focus on the impact of processing on the nutritional composition of orange juice.</td>
<td>different orange juice processing techniques, what vitamin C is and its degradation in processing.</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>vitamin C techniques to measure vitamin C concentration – this may not be included or just focuses on the method used in this experiment.</td>
<td>the different orange juice processing techniques, techniques to extract vit C, what is vitamin C an aim</td>
</tr>
<tr>
<td>what vitamin C is and its properties – specifically how it can be degraded in processing.</td>
<td>what vitamin C is and its properties – specifically how it can be degraded in processing.</td>
<td>what vitamin C is and its degradation in processing.</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>There are no references to support information. Lecture and tutorial notes have been used as a source.</td>
<td></td>
</tr>
<tr>
<td>background on measuring vitamin C concentration in orange juice samples – with a focus on the technique used in the lab.</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>measuring vitamin C concentration in orange juice – with a focus on the technique used in the lab is included</td>
<td>Only secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td></td>
</tr>
<tr>
<td>Literature is used to support information.</td>
<td>Only primary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>Primary sources are mostly used. Lecture and tutorial notes are not used as a source.</td>
<td>A 50/50 mix of primary-secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>Only secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>Only secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
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<td>Section</td>
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<td><strong>Aim</strong>&lt;br&gt;(1 mark)</td>
<td>The aim of the study is included.</td>
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<td><strong>Method</strong>&lt;br&gt;(2.5 marks)</td>
<td>The methods should be written out in full. All steps in the methods have been included. All deviations from the original methods are mentioned – if any.</td>
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<td><strong>Results</strong>&lt;br&gt;(5 marks)</td>
<td>Group results on the Vitamin C concentration of each sample are reported in a relevant format (i.e. table or figure). Individual results: Organoleptic/sensory properties of each sample have been reported in relevant format. Short text explanation of each of the findings accompanies the table or figure. Literature is used to support information.</td>
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<td>Calculations (1.5 marks)</td>
<td>Calculations have been included as an attachment to the poster.</td>
<td>Calculations have been included as an attachment to the poster and are correct.</td>
<td>Calculations have been included as an attachment to the poster. There are 1-2 errors in the calculations.</td>
<td>Calculations have been included as an attachment to the poster. There are 3-4 errors in the calculations.</td>
<td>Notes are not used as a source.</td>
<td>Only secondary sources are used. Lecture and tutorial notes are not used as a source.</td>
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<td>Limitations (2.5 marks)</td>
<td>Includes a description of the limitations of the study including (but not inclusive) – the students not being experienced, difficult to determine the end point of the titration due to the dark colour of some orange juice samples, inaccurate equipment, not a rigorous experiment, calculation errors etc.</td>
<td>A comprehensive discussion of the limitations are included and linked to the literature.</td>
<td>Most of the limitations are discussed and linked to the literature.</td>
<td>Only half of the limitations are discussed and linked to the literature.</td>
<td>Only primary sources are used. Lecture and tutorial notes are not used as a source.</td>
<td>Only a list of the limitations – possibly only 2-3 limitations mentioned.</td>
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<td>Literature is used to support information.</td>
<td>Only primary sources are used. Lecture and tutorial notes are not used as a source.</td>
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<td>Conclusion (1.5 marks)</td>
<td>Summarises the main outcomes of the study ensuring there is a link to the aim. Recommendations/implications of the findings are included. Does not include a rewrite of findings or include new information.</td>
<td>Analytical and clear conclusions well grounded in earlier information. Links back to the aim of the study. Recommendations/implications included.</td>
<td>Clear conclusions grounded in earlier information. Links to the aim of the study. Recommendations/implications included.</td>
<td>Evidence of findings and conclusions conceptually grounded in earlier discussion. Somewhat links to the aim of the study. Recommendations/implications included.</td>
<td>Structured around a rewrite of major findings. Does not link back to the aim. Generally includes information relating to implications of findings. May include new information.</td>
<td>Unsubstantiated/invalid conclusions based on anecdote and generalisation only, or no conclusions at all.</td>
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<td>Format, style and structure (2 marks)</td>
<td>The presentation of ideas and analysis flow in a logical manner. The poster is easy to read and the information presented is accurate. Relevant tables, graphs, pictures and the poster is colourful. There are no spelling or grammatical errors. The report is within the word limit used 12 point font.</td>
<td>The information on the poster flows in a logical manner. The poster is easy to read and the information presented is accurate. Relevant tables, graphs, pictures included and the poster is colourful. There are no spelling or grammatical errors. The report is within the word limit used 12 point font.</td>
<td>The presentation of ideas and analysis mostly flow in a logical manner. The poster is easy to read and the information presented is accurate. Relevant tables, graphs, pictures and the poster is colourful. There are up to 5 spelling or grammatical errors. The poster is within the word limit used 12 point font.</td>
<td>The presentation of ideas and analysis is a little disjointed. The poster is somewhat easy to read and the information presented is accurate. Some relevant tables, graphs included and the poster is colourful. There are up to 10 spelling or grammatical errors. The poster is within the word limit used 12 point font 1.5 spacing.</td>
<td>The flow of information is disjointed making the poster challenging to read. Some of the information presented may not be accurate. Poster is not colourful and pictures are not relevant. There are &gt;10 spelling and grammatical errors. The poster may not be within the word and may not use 12 point font.</td>
<td>The information is extremely disjointed and is very difficult to read. The report is based on inaccurate information. There are lots of spelling and grammatical errors. The poster may not be within the word and may not use 12 point font.</td>
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<td>References (1 marks)</td>
<td>Vancouver referencing style has been used.</td>
<td>All references have used a consistent Vancouver referencing style. There are no errors in the referencing.</td>
<td>All references have used a consistent Vancouver referencing style. There are a few errors in the referencing.</td>
<td>All references have used a consistent Vancouver referencing style. There are more than 6 errors in the presentation of the referencing.</td>
<td>The use of the Vancouver referencing style is not consistent and there are a number of errors throughout the presentation of the references.</td>
<td>Vancouver style has not been used.</td>
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