



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training



**Assessment and Training
Package**

For a

WINE MAKER

Qualification Level: 1

**Occupational Cluster: Nutrition and Food
Technology**

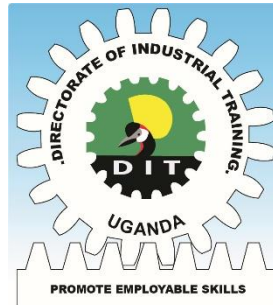
September 2020

Reviewed by:

**Qualifications Standards Department
Directorate of Industrial Training**

Funded by:

Government of Uganda



Assessment and Training Package

For a WINE MAKER

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Technology**

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Under BTVET Act, 2008, the functions of the Directorate of Industrial Training are:

- (a) To identify the needs of the labour market for occupational competencies that fall under the UVQF.
- (b) To regulate apprenticeship schemes.
- (c) To foster and promote entrepreneurial values and skills, as an integral part of the UVQF.
- (d) To secure adequate and sustainable financing for the efficient operations of the Directorate.
- (e) To accredit training institutions or companies as assessment centres.
- (f) To determine fees payable under the Act.
- (g) To develop, apply, expand and improve the purposeful application of Uganda vocational qualifications defined in the UVQF.
- (h) To assess and award Uganda Vocational Qualifications.
- (i) To promote on-the-job training in industry for apprenticeship, traineeship and indenture training and for other training such as further skills training and upgrading.
- (j) To prescribe the procedure for the making of training schemes.

Further to the above provisions, there is an established Uganda Vocational Qualifications Framework (UVQF), under part V of the BTVET Act, 2008. It is stated that:

The purpose of the UVQF is to;

- (a) Define occupational standards in the world of work.
- (b) Define assessment standards.
- (c) Award vocational qualifications of learners who meet the set standards of different studies.
- (d) Provide guidelines for modular training.

The UVQF shall follow principles of Competence Based Education and Training (CBET) which include:

- (a) Flexible training or learning modules.
- (b) Positive assessment and certification.
- (c) Assessment of prior learning.
- (d) Recognition of formal and non-formal training.
- (e) Self-paced or individual learning.
- (f) Work place learning.

For award and recognition of certificates, the BTVET Act, 2008 provides that:

- (1) The Directorate and other examination boards established under the Act shall award certificates and diplomas for Business, Technical or Vocational Education and Training under the UVQF.
- (2) The Certificates and Diplomas to be awarded shall be in the form prescribed by the Minister on the recommendation of the Industrial Training Council.
- (3) The Certificates and Diplomas awarded under the Act shall be recognised in the Uganda education system and by the labour market.

Under the TVET Implementation Standards 2020, the proposed new mandate of the Directorate of Industrial Training shall be restricted to promoting the highest standards in the quality and efficiency of industrial training in the country and ensuring an adequate supply of properly trained manpower at all levels in the industry and the world of work.

The functions shall include:

- (a) Regulating Industrial Training and Trainers.
- (b) Developing Industrial Training Curricula.
- (c) Harmonising Curricula and Certificates of competence.
- (d) Assessing Industrial Training.
- (e) Development of Occupational Standards and Assessment and Training Packages (ATPs) for Trade Testing for the industry and world of work.
- (f) Awarding certificates in that respect.

At operational level in the Directorate, the Qualification Standards Department performs development tasks related to concepts, procedures and instruments for establishment of the UVQF in close collaboration with both public and private stakeholders in vocational training.

In particular, the Department organises and coordinates the development of Assessment and Training Packages for use in competence-based vocational training as well as standards-based assessment and certification.

The Directorate has therefore produced this Assessment and Training Package for use in implementing Competence-Based Education and Training mechanisms.

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Word from Permanent Secretary

The Kajubi Report (1989) and the Uganda Government White Paper on Education Review (1992) emphasised that the Uganda Secondary School Education should be vocationalised.

The World Bank Report on education in Uganda 2007 observed that although Uganda was experiencing steady economic growth on one hand, the secondary education curriculum was inadequately addressing the social and economic needs of the country on the other. The Report further noted that it is not the very top academic cadres that contribute most to the growth of the GDP but rather the competent middle level technicians that are flexible and technologically literate that the economy needs in the labour market at all levels.

Correspondingly, the NDP III 2020/21- 2024/5 highlights (i) low labour productivity (ii) high youth unemployment (38%) (iii) low transition rates from training to employment (35%) as some of the key challenges to Human Capital Development in Uganda.

In order to overcome these challenges, NDP III 2020/21- 2024/5, under objective 2 peaks the need to train the learners for the urgently needed skills and mainstream a dual education and training system. This paved way for the development of the lower secondary school vocational curriculum which supports both academic and vocational training.

The afore is in line with the Uganda Vision 2040. Under section 261, it emphasises that learners will be accorded opportunities to excel in the skills areas they are placed into. These will range from sports and cut to technical and vocational training. Hitherto, section 262 clearly states that the entire education system will be changed to emphasise practical skills, attitude and moral values.

Government of Uganda through the Ministry of Education and Sports rolled out the New Lower Secondary Curriculum in secondary schools countrywide during the first term of the academic year 2020. The overall goal of this curriculum is to produce graduates with employable skills and who are competitive in the labour market. It should be emphasised that vocational training will produce graduates who are employable. In the New curriculum, emphasis will be on equipping learners with employable skills and competencies. This will enable learners perform the requisite duties of the specified occupations. This is the reason why the lower secondary school vocational curriculum was tailored to the assessment requirements of the world of work.

Reading from the Curriculum Framework page 12, it is stated that the learners will be assessed by DIT. Upon assessment and certification, the graduates will be employable and competitive in the labour market. It's against this background that DIT, within its mandate vested in the BTVET Act, 2008 comes on board to take the lead in the development of the requisite Assessment and Training Packages (ATPs) for the various occupations that will be assessed under the Lower Secondary Curriculum.

The ATPs can be used by any training provider and/or those who wish to present themselves for Occupational Assessment and Certification.

Herewith, the Directorate of Industrial Training presents the Assessment and Training Package for training, assessment and certification of a **WINE MAKER QUALIFICATION LEVEL 1**.

Finally, I thank all individuals, organisations and review partners who have contributed and/or participated in the review of this noble document.



Alex Kakooza
Permanent Secretary

Executive summary

This Assessment and Training Package is a Competence-Based Education and Training (CBET) tool and consists of three major parts:

- 0.1 **PART I: The Occupational Profile (OP) of a WINE MAKER.** This Occupational Profile which was reviewed by Wine Makers practicing in the world of work mirrors the duties and tasks that Wine Makers are expected to perform.
- 0.2 **PART II: Training Modules** in the form of guidelines to train Wine Makers both on the job as well as in training centres (or combinations of both venues of learning). The Training Modules herein have been reviewed basing on the Occupational Profile and hence are directly relevant for employment.
- 0.3 **PART III: Assessment Instruments** in the form of performance (Practical) and written (theory) test items that can and should be used to assess whether a person complies with the requirements of employment as a WINE MAKER. These assessment instruments were reviewed jointly by job practitioners (Wine Makers) and instructors based on the occupational profile and training modules.
- 0.4 While the Occupational Profile (OP) contained in PART I of this document provides the information on **WHAT a person is expected to do** competently in the world of work, the test items, - including performance criteria- of PART III qualify the **HOW and/or HOW WELL a person must do the job.**
- 0.5 The modular format of the curriculum (PART II) allows learners to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing flexibility for learners to move directly into an entry level job, go for further modules or advance to higher levels of training. Modular courses allow more learners to access the training system because training centres as well as companies can accommodate more learners in a given period of time.
- 0.6 In addition to improved access, equity and relevance of BTVET, the UVQF will also enable people who are convinced to have acquired competencies laid down in this ATP through prior training and on-the-job experience to access assessment and certification directly; be it on the basis of a single module, a group of modules or all modules pertaining to the occupation at once. This achievement will facilitate Recognition of Prior Learning (RPL).

0.7 The parts of this Assessment and Training Package were sequentially reviewed as follows:

- i Part 1: Occupational Profile: **August 2020**
- ii Part 2: Training Modules: **August 2020**
- iii Part 3: Assessment Instruments (initial bank): **August 2020**

This ATP (or parts of it) may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

DIT takes responsibility of any shortcomings that might be identified in this publication and welcomes suggestions for effectively addressing the inadequacies. The suggestion can be communicated to DIT through P.O. Box 20050, Kampala or through email uvaf.dit@gmail.com.



Patrick Byakatonda
Ag Director

Acknowledgement

The Qualifications Standards Department of DIT acknowledges the valuable contributions to the review of this Assessment and Training Package by the following persons, Institutions and organisations:

- Members of the DIT Industrial Training Council.
- The Director and staff of DIT.
- Ministry of Education and Sports.
- The practitioners from the world of work.
- Teachers and instructors of Wine Maker from various secondary schools.
- Nutrition and Food Technology Curriculum Specialists from NCDC.
- Examination specialists from UNEB.
- The facilitators involved in guiding the development panels in their activities.
- The Government of Uganda for financing the development of this ATP.

Abbreviations and Acronyms

A&C	Assessment and Certification
ATP	Assessment and Training Packages
CBET	Competency Based Education and Training
DIT	Directorate of Industrial Training
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-Working Assignment
MC	Modular Curriculum
MoES	Ministry of Education and Sports
OP	Occupational Profile
PEX	Practical Exercise
PTI	Performance (Practical) Test Item
QS	Qualification Standards
RPL	Recognition of Prior Learning
TIB	Test Item Bank
TVET	Technical, Vocational Education and Training
UVQ	Uganda Vocational Qualification
UVQF	Uganda Vocational Qualifications Framework
WTI	Written (Theory) Test Item

Key definitions

Assessment	Assessment is the means by which evidence is gathered and judged to decide if an individual has met the stipulated assessment standards or not. Testing is a form of formal assessment.
Certification	Certification is a formal procedure to issue a certificate (qualification) to an individual that has demonstrated during formal assessment that he/she is competent to perform the tasks specified in the occupational profile.
Competence	Integration of skills, knowledge, attitudes, attributes and expertise in doing /performing tasks in the world of work to a set standard.
Competency	(Occupational) competency is understood as the ability to perform tasks common to an occupation to set a standard.
CBET	Competence-based education and training means that programmes: <ol style="list-style-type: none">1. have content directly related to work2. focus is on 'doing something well'3. assessment is based upon industry work standards, and4. curricula are developed in modular form
Duty	A Duty describes a large area of work in performance terms. A duty serves as a title for a cluster of related Tasks (see also: TASK).
Learning-Working Assignment (LWA)	LWA are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. "small projects"). In a working environment LWA are real work situations/assignments.
Module	Modules are part(s) of a whole curriculum. Modules can be considered as "self-contained" partial qualifications which are described by learning outcomes or competencies and which can be assessed and certified individually.
Occupational Profile (OP)	<p>An Occupational Profile is an overview of the duties and tasks a job incumbent is expected to perform competently in employment.</p> <p>Occupational Profiles developed by practitioners from the world of work enhance the relevance of training and learning to the requirements of the world of work.</p>

Occupational Profiles define what a person is supposed to do in performance terms. It also contains generic information regarding related knowledge and skills, attitudes/behaviour, tools, materials and equipment required to perform as well as trends/ concerns in the occupation.

Occupational profiles are the reference points for developing modular curricular and assessment standards

Qualification

A qualification is a formal reward for demonstrating competence, based on formal assessment against set standards and provided to the individual in the form of a certificate specifying the nature of the competence.

Task

Job tasks represent the smallest unit of job activities with a meaningful outcome. Tasks result in a product, service, or decision. They represent an assignable unit of work and have a definite beginning and ending point. Tasks can be observed and measured. (*Also see: Duty*)

1.0 ATP-PART I

Occupational Profile for a WINE MAKER

- 1.1 The OCCUPATIONAL PROFILE (OP) for "WINE MAKER" below defines the **Duties** and **Tasks** a competent Wine Maker is expected to perform in the world of work (on the job) in Uganda and the East African region today.
- 1.2 Since it reflects the skill requirements of work life, the Occupational Profile is the reference document for the subsequent development of training modules and assessment instruments (test items) which are directly relevant to employment in Ugandan and the East African businesses and industries.
- 1.3 To ensure that the Occupational Profile is relevant for employment in Uganda and East Africa, the DIT used the method of "occupational/job profiling.

This approach involves the brainstorming of a panel of 8 to 12 competent job practitioners guided by trained and experienced facilitators. During a two-day workshop the panellists defined the duties and tasks performed in employment, as well as the prerequisite skills, knowledge, attitudes, tools and equipment, and the future trends and concerns in the occupation/job.

- 1.4 The panellists, facilitators and coordinators who participated in developing this Occupational Profile are listed on the following page.

Expert Panel

Lwasampijja Michael
Bbale S.S

Namiiro Zerida
Mbale S.S

Adhum Andera Elizabeth
New Nebem Enterprises LTD

Kafeero Joel
Masaka S.S

Najja Sylvia
Iganga S.S

Grace Muhoozi
Kyambogo University

Ssentamu Pascal
The Senta for Industrialisation

Ssempijja Lawrence
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Nansikombi Phionah
Bukoyo S.S Iganga

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Funded by
Government of Uganda



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Directorate of Industrial Training

Occupational Profile
for a
"Wine Maker"

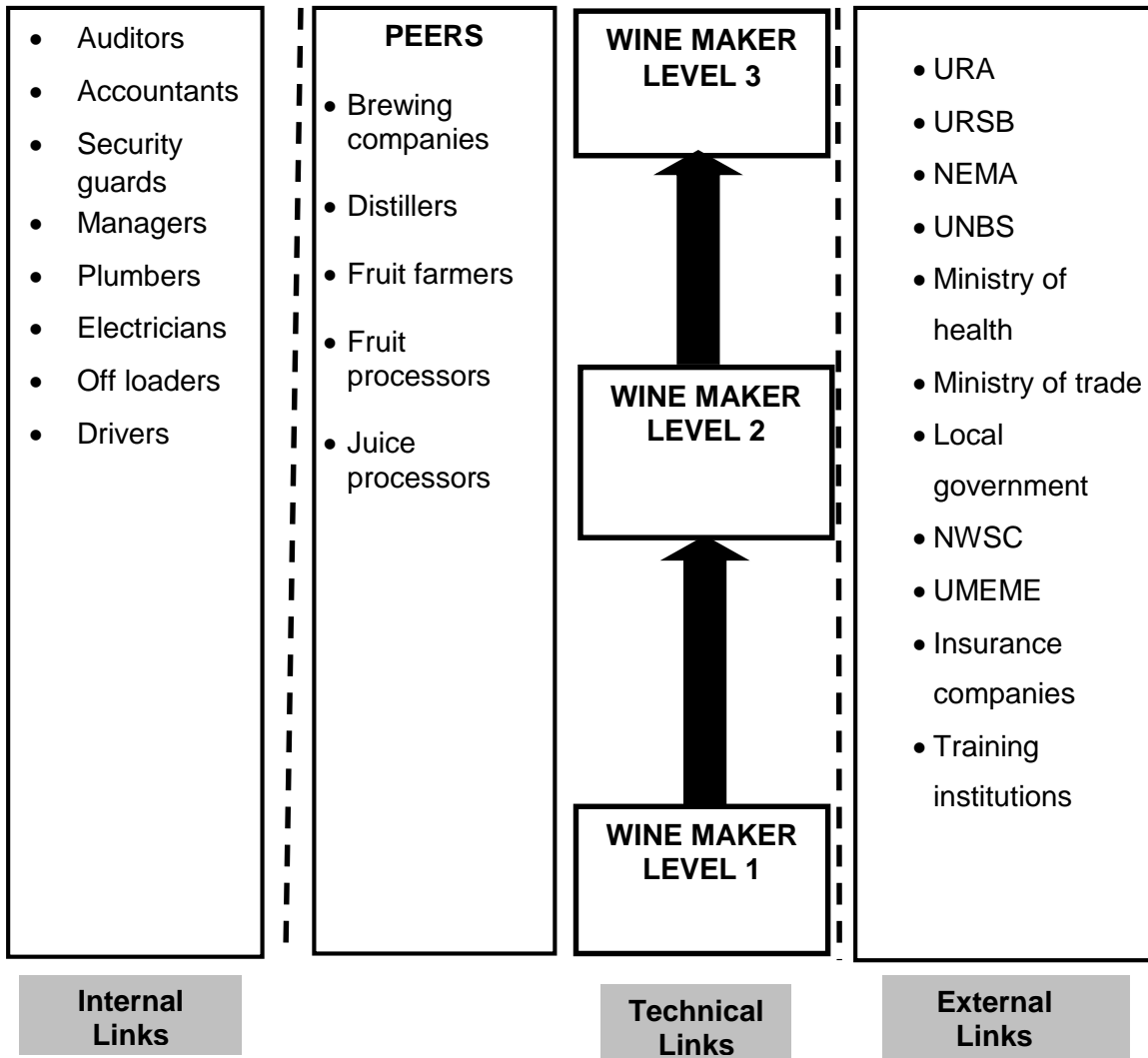
Reviewed by: Directorate of Industrial Training
(Qualifications Standards)

Dates of workshop: 14th – 18th September 2020

NOMENCLATURE FOR THE OCCUPATION OF WINE MAKER

Definition: A Wine Maker is a person who identifies suitable materials, processes, packages wine and wine products for commercial purposes.

JOB ORGANISATION CHART FOR A WINE MAKER



UVQ Level I Wine Maker; is a person who can identify suitable materials, prepares and processes them into wine on a small scale.

UVQ level II Wine Maker; is a person who can operate a medium sized winery and control quality.

UVQ Level III Wine Maker; is a person who can improve quality, processes and manage a large-scale wine enterprise.

Duties and Tasks

A. PLAN WINERY	A1 Conduct feasibility study	A2 Prepare business plan	A3 Secure business premises
	A4 Determine source of funding	A5 Identify tools and equipment	A6 Determine source of materials
	A7 Determine human resource requirements		

B. ESTABLISH A WINERY	B1 Select site	B2 Secure site	B3 Setup structures
	B4 Prepare storage facilities	B5 Procure tools equipment and materials	B6 Install equipment
	B7 Store raw materials, tools and equipment	B8 Setup a laboratory	

C. MAKE WINE	C1 Develop a formula	C2 Prepare tools and materials	C3 Extract must
	C4 Test must parameters	C5 Pasteurise must	C6 Add additives
	C7 Ferment must	C8 Stop fermentation	C9 Rack off (Transfer wine)
	C10 Filter wine	C11 Pack wine	

D. CONTROL WINE QUALITY	D1 Test wine parameter	D2 Stabilise wine	D3 Blend wine
	D4 Clarify wine	D5 Age wine	D6 Make a prototype

E. MARKET WINE	E1 Brand products	E2 Price products	E3 Advertise products
	E4 Transport products	E5 Offer sale promotions	E6 Offer after sale services
	E7 Exhibit products		

F. MAINTAIN WINE ENTERPRISE	F1 Develop maintenance schedule	F2 Manage raw materials	F3 Calibrate equipment and tools
	F4 ...Service tools and equipment	F5 Replace tools and equipment	F6 Repair tools and equipment
	F7 ...Keep maintenance record	F8 Control Pests and rodents	F9 Monitor production process
	F10 Monitor storage		

F. PERFORM OCCUPATIONAL HEALTH, SAFETY, AND ENVIRONMENTAL PROTECTION PRACTICES	F1 Wear protective gear	F2 Display safety signs	F3 Manage additives
	F4 Manage waste	F5 Manage hazards	F6 Administer first aid

G. PERFORM ADMINISTRATIVE TASKS	G1 Recruit workers	G2 Train workers	G3 Orient workers
	G4 Schedule work	G5 Supervise works	G6 Motivate workers
	G7 Pay workers	G8 Appraise workers	G9 Pay dues
	G10 Manage conflicts	G11 Make reports	G12 Secure operational permits
	G13 Communicate with stakeholders		

Additional Information

Generic Knowledge & Skills	Attitudes / Traits / Behaviour
1. Tools, equipment and material usage	1. Self-motivated
2. Operation and maintenance	2. Trust worthy
3. Waste disposal and management	3. Honest
4. Safety health and environment	4. Hard working
5. Environmental change	5. Tolerant
6. Quality control	6. Team work
7. Communication skills	7. Good time management
8. Information and technological communication	8. Committed
9. Financial literacy	9. Flexible
10. Problem solving	10. Good listener
11. Numeracy and literacy skills	11. Competitive but cooperative
12. Application of food additives	12. Innovative and creative
13. First aid management	13. Responsible
14. Team work and cooperation	14. Physically fit
15. Management of wine by- products (wine products)	15. Knowledgeable
16. Resource mobilisation and management	16. Patient
17. Counselling and guidance of staff	17. Social
18. Public relations	18. Polite
19. Entrepreneurship skills	19. Calm
20. Marketing skills	20. Respectful
21. Negotiation skills	21. Confident
22. Time management	22. Intelligent
23. Types of transport	23. Logical
24. Staff training and monitoring skills	24. Trainable
25. Analytical skills	25. Co-operative
26. Record keeping	26. Tidy
27. Business and customer service skills	
28. Quality of raw-materials	
29. Cleaning skills	
30. Human resource management	
31. Planning leadership skills	

Tools, Materials and Equipment

- | | |
|--|------------------------------|
| 1. Working table | 30. Communication devices |
| 2. Knives | 31. Flavors |
| 3. Holding containers e.g. (basins, buckets) | 32. Detergents |
| 4. Cooking/ boiling containers | 33. Citric acid |
| 5. Extractors | 34. Sign post |
| 6. Heat source | 35. Pallets |
| 7. Fermentation containers | 36. Weighing scale |
| 8. Juice blenders | 37. Markers |
| 9. Sieves | 38. First aid kit |
| 10. Filtering unit | 39. Disposable pits |
| 11. Wine hydrometer | 40. Incinerator |
| 12. Thermometer | 41. Soak pit |
| 13. Refractometer | 42. Crate |
| 14. Vinometer | 43. Noticeboard |
| 15. Pangas | 44. Brochures |
| 16. Brooms | 45. Water tank |
| 17. Gloves | 46. Fumigants |
| 18. Scrubbing brushes | 47. Sprayer |
| 19. Racks | 48. Forked hoe |
| 20. Towels | 49. Rake |
| 21. Aprons | 50. Root tubers |
| 22. Head cap | 51. Sane vegetables(carrots) |
| 23. Masks | 52. Fruits |
| 24. Industrial boots | 53. Yeast |
| 25. Overalls | 54. Some flowers(hibiscus) |
| 26. Record books and pens | 55. Tinning agents |
| 27. Files | 56. Enzymes |
| 28. Filing cabinet | 57. Water |
| 29. Office desk | 58. Granulated sugar |
| | 59. Honey |

Trends and Concerns

1. Changes in technology
2. Increase in specialisation
3. Increased production costs
4. Un necessary use of chemicals
5. High skilled personal
6. Improved quality of products for export
7. Competition on use of fruits between making wine and eating fresh fruits
8. Over use of chemicals in growing fruits and other materials
9. Un regulated consumption of alcohol

2.0 ATP-PART II

Training Modules for a WINE MAKER

- 2.1 A curriculum is a “guide / plan for teaching and learning” which provides a guide to teachers, instructors and learners. In the envisaged system of competence-based or outcome-oriented education and training (CBET), Curricula are no longer the benchmark against which assessment is conducted. It is rather the Occupational Profile and the related Test Items that provide the benchmark for assessment as well as for curriculum development.
- 2.2 This modular format of the curriculum allows learners of the WINE MAKER OCCUPATION to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration allowing learners to move directly into an entry level job, do further modules and advance to higher levels of training. Modular courses allow more learners to access the training system because training centres as well as companies can accommodate more learners in a given period of time.
- 2.3 The modules were developed jointly by both instructors from training centres and job practitioners. They were developed using the Occupational Profile as a reference point and taking into account the specifications of training and learning outcomes in the form of Test Items described in Part II.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.
- LWAs are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.
- PEXs are therefore sub-sets of a LWA.
- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training centre or at the work place; or combinations of both.

WHO IS A WINE MAKER QUALIFICATION LEVEL 1

A **Wine maker Level 1** is a person who can identify suitable materials, prepares and processes them into wine on a small scale

TRAINING MODULES FOR A WINE MAKER

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/WM/M1.1	Establish a Winery	120	2
UE/WM/M1.2	Process Wine	240	4
UE/WM/M1.3	Maintain Wine Business	240	4
Summary	3 Training modules	360 hours	10 weeks

Note: Average duration is contact time but NOT calendar duration

It is assumed that:

- 1 day is equivalent to 8 hours of nominal learning and
- 1 month is equivalent to 160 hours of nominal learning.

Information given on the average duration of training should be understood as a guideline. Quick learners may need less time than indicated or vice versa.

At completion of a module, the learner should be able to satisfactorily perform the included Learning Working Assignments, their Practical Exercises and attached theoretical instruction, as the minimum exposure.

Prior to summative assessment by recognised agencies, the users of these Module Guides are encouraged to carefully consider continuous assessment using samples of (or similar) performance (practical) and written test items available in part 3 of this ATP.

Code	UE/WM/M1.1
Module title	M1.1: Establish a Winery
Related Qualification	Part of: Uganda Vocational Qualification (WINE MAKER UVQ1)
Qualification Level	1
Module purpose	After completing this module, a trainee shall be able to establish a winery.
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Conduct Survey</p> <p>LWA 1/2: Generate Records</p> <p>LWA 1/3: Prepare a Short-Term Work Plan</p> <p>LWA 1/4: Preparation of Workers, Employees or Helpers</p> <p>LWA 1/5: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainee acquires a targeted competence. 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.
Related Practical Exercises (PEXs)	<p>LWA1/1: Conduct Survey</p> <p>PEX 1.1: Wine market survey</p> <p>PEX 1.2: Prepare company profile</p> <p>PEX 1.3: Requirements for the winery (production costs)</p> <p>PEX 1.4: Make a financial plan</p> <p>PEX 1.5: Workers to support you (human resources plan)</p> <p>PEX 1.6: Prepare a budget</p> <p>PEX 1.7: Calculate costs and profits of a winery</p>
	<p>LWA 1/2: Generate Records</p> <p>PEX 2.1: Production records</p> <p>PEX 2.2: Financial records</p> <p>PEX 2.3: Secure premises/space</p>
	<p>LWA 1/3: Prepare a Short-Term Work Plan</p> <p>PEX 3.1: Getting started on establishment</p> <p>PEX 3.2: Set up the structure and set up of each room or space</p>
	<p>LWA 1/4: Preparation of Workers, Employees or Helpers</p>

	<p>LWA 1/5: Perform Occupational Health, Safety and Environmental Protection Practices</p> <p>PEX 5.1: Personal requirements of every worker PEX 5.2: Wear protective gear PEX 5.3: Perform firefighting PEX 5.4: Display health and safety signs PEX 5.5: Administer first aid</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> • Budgeting • Record keeping • Pricing • Value addition methods • Methods of advertising • Negotiating prices • Conducting market research • Communication skills • Marketing • First aid
Average duration of learning	<p>120 hours (15 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • <i>5 days of occupational theory and</i> • <i>10 days of occupational practice</i>
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided that all equipment and materials required for this module training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related practical and written test items from item bank.

Minimum required tools/ equipment/ implements or equivalent	computers, furniture, calculators, chairs, tables, communication devices, first aid box
Minimum required materials and consumables or equivalent	coloured pencils, manilla papers, record keeping books, masks, books, pens, paper and books, airtime and data, markers
Special notes	This module is applicable to people with special needs

Code	UE/WM/M1.2
Module title	M1.2: Process Wine
Related Qualification	<u>Part of:</u> Uganda Vocational Qualification (WINE MAKER UVQ1)
Qualification Level	1
Module purpose	After completion of this module, the trainer shall be able to process and produce wine.
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Prepare Work Area and Materials Required LWA 2/2: Extract Must LWA 2/3: Monitor the Fermentation Process LWA 2/4: Perform Quality Control</p> <p>Note: <i>The learning exercises may be repeated until the trainee acquires targeted competence;</i> <i>The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.</i></p>
Related Practical Exercises (PEXs)	<p>LWA 2/1: Prepare Work Area and Materials Required PEX 1.1: Clean and arrange work area PEX 1.2: Clean, sanitise and arrange the equipment and tools PEX 1.3: Boil (treat) the water PEX 1.4: Clean raw materials PEX 1.5: Clean fruits</p> <p>LWA 2/2: Extract Must PEX 2.2: Express juice PEX 2.1: Pasteurise or simmer the must/mixture PEX 2.3: Prepare the syrup PEX 2.4: Constitute the must mixture for fermentation PEX 2.5: Ferment must</p>
	<p>LWA 2/3: Monitor the Fermentation Process PEX 3.1: Mature wine PEX 3.2: Clarify wine PEX 3.3 Blend wine</p>

	<p>LWA 2/4: Perform Quality Control</p> <p>PEX 4.1: Taste wine quality PEX 4.2: How to pack wine PEX 4.3: Label bottles with your brand PEX 4.4: Age wine / mature wine PEX 4.5: Price the product PEX 4.6: Market the product PEX 4.7: Advertise wine</p>
Occupational health and safety	Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.
Pre-requisite modules	None
Related knowledge/ theory	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate.</i></p> <ul style="list-style-type: none"> • Methods of treating water • Methods of cleaning equipment • Hygiene • Methods of analysis • Fermentation process • Good manufacturing practices • Operation of machinery • Observation skills • Knowledge of packaging • Product standardisation • Knowledge of fruits
Average duration of learning	<p>240 hours (30 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 5 days of occupational theory and • 25 days of occupational practice
Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided that all equipment and materials required for this module training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related written test items from item bank

Minimum required tools/ equipment/ implements or equivalent	siphon, fermentation jars and tanks, tables, pans, blenders, filters, air locks, thermometer, hydrometer, refractometer, pH meter, buckets, packaging materials, weighing scale, personnel protective wear, vinometer, Juicers, funnel, measuring cylinder, measuring jars, muslin cloths, heaters, extractors, knives, pangas, corking machine, cupper, sieves, brushes and moppers, brooms
Minimum required materials and consumables or equivalent	labels, fruits, sugar, roots, flowers, additives, water, yeast, fining agents, enzymes, stabilises, packaging materials, seals, detergents, sanitisers, masks.
Special notes	The module is applicable to people with special needs

Code	UE/WM/M1.3
Module title	M1.3: Maintain Wine Enterprise
Related Qualification	<u>Part of:</u> Uganda Vocational Qualification (WINE MAKER UVQ1)
Qualification Level	1
Module purpose	After completing this module, a trainee shall be able to maintain a wine business.
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Generate Records for the Wine Enterprise LWA 3/2: Manage Resources of the Winery LWA 3/3: Evaluate Addition LWA 3/4: Maintain Tools and Equipment LWA 3/5: Ensure Occupational Safety and Environmental Protection Practices</p> <p>Note:</p> <ol style="list-style-type: none"> 1. The learning exercises may be repeated until the trainees acquire targeted competence; 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning working assignment.
Related Practical Exercises (PEXs)	<p>LWA 3/1: Generate Records for the Wine Enterprise PEX 1.1: Additional records PEX 1.2: Keep inventory of inputs PEX 1.3: Production records PEX 1.4: Schedule activities PEX 1.5: Financial records</p> <p>LWA 3/2: Manage Resources of the Winery PEX 2.1: Maintain the purchases/raw materials PEX 2.2: Sort out raw materials PEX 2.3: Grade raw materials PEX 2.4: Clean raw materials PEX 2.5: Weigh raw materials PEX 2.6: Store raw materials</p> <p>LWA 3/3: Value Addition PEX 3.1: Improve packaging PEX 3.2: Improve flavours</p>

	<p>LWA 3/4: Maintain Tools and Equipment PEX 4.1: Prepare maintenance schedule PEX 4.2: Repair tools and equipment PEX 4.3: Replace tools and equipment PEX 4.4: Train workers on use of equipment PEX 4.5: Service tools and equipment PEX 4.6: Engrave tools and equipment PEX 4.7: Clean and store tools and equipment</p> <p>LWA 3/5: Ensure Occupational Safety and Environmental Protection Practices PEX 5.1: Administer first aid PEX 5.2: Wear protective gear PEX 5.3: Display safety signs PEX 5.4: Manage waste PEX 5.5: Perform standard operating procedures</p>
<p>Occupational health and safety</p>	<p>Precautions, rules and regulations on occupational health, safety and environmental protection, included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs.</p>
<p>Pre-requisite modules</p>	<p>None</p>
<p>Related knowledge/ theory</p>	<p><i>For occupational theory suggested for instruction/ demonstration, the trainer is not limited to the outline below. In any case, related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</i></p> <ul style="list-style-type: none"> ▪ Problem solving skills ▪ Trouble shooting skills ▪ Handling resources ▪ Budgeting ▪ Managing waste ▪ Standardising wine ▪ Managing human resources ▪ Scheduling work ▪ Managing hazards ▪ Book keeping ▪ Financial management ▪ Numeracy and literacy
<p>Average duration of learning</p>	<p>240 hours (30 days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 6 days of occupational theory and • 24 days of occupational practice

Suggestions on organisation of learning	The acquisition of competencies (skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided that all equipment and materials required for this module training are in place.
Assessment	Assessment to be conducted according to established regulations by a recognised assessment body using related written test items from item bank.
Minimum required tools/ equipment/ implements or equivalent	calculators, chairs, tables, computers, file cabinets, communication device, first aid, furniture, transport means, store room, cleaning tools
Minimum required materials and consumables or equivalent	pens, books, record keeping books, manilla papers, rulers, masks, files, markers, airtime and data,
Special notes	This module is applicable to people with special needs

3.0 ATP-PART III

Assessment Instruments for a WINE MAKER

- 3.1 Assessment of occupational competence is the procedure by which evidence is gathered and judged to decide if an individual (candidate) has met the stipulated assessment standards or not. In this ATP the **standards** to assess occupational competences are reflected in the form of the Occupational Profile and related Test Items.
- 3.2 Assessment of occupational competence should comprise both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile, a combined panel of job practitioners and Instructors developed a substantial number of test items for assessing (practical) performance as well as items for assessing occupational knowledge (theory) all stored in an electronic Test Item Bank (TIB) at Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business and manufacturing enterprises. They comprise a test assignment for candidates and assessment criteria and/or scoring guides for assessors' use.
- 3.5 Written Test items (WTI) for written testing of occupational theory, (knowledge) are presented in different forms which include:
- Short answer test items.
 - Multiple choice test items and,
 - Matching test items, These WTIs herein focus on functional understanding as well as trouble-shooting typically synonymous with the world of work.
- 3.6 Composition of assessment / test papers will always require good choices of different types of WTI in order to ensure the assessment of relevant occupational knowledge required of candidates to exhibit competence.
- 3.7 The test items contained in the Test Item Bank may be used for continuous / formative assessment during the process of training as well as for summative assessment of candidates who have acquired their competences non-formally/or informally.

3.8 In this document, the following samples of test items for assessing both performance (practical) and occupational knowledge (theory) of a WINE MAKER are included.

3.9 **Overview of test item samples included:**

No.	Type of Test Item	Numbers included
1	Written (Theory)- short answer	2
2.	Written (Theory)- multiple choice	2
3.	Written (Theory)- matching item- generic	2
4	Written (Theory)- matching item- cause effect	1
4.	Written (Theory)- matching item (work sequence)	2
5.	Performance (Practical) test items	1
	Total	10

WRITTEN TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 1			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work- sequence
Complexity level:	C2			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	3 minutes			

Test Item	Mention any three ways which can be used to improve on the quality of wine?
Answer spaces	(i) (ii) (iii)
Expected key (answers)	(i) Blending (ii) Packaging (iii) Flavouring (iv) Aging (v) Clarifying (vi) Filtering

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 2			
Occupational Title:	Wine maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause-Effect	Work-sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	3 minutes			

Test Item	State any four additives used in wine making
Answer spaces	(i) (ii) (iii) (iv)
Expected key (answers)	(i) Sugar (ii) Bentonite clay (iii) Metabisulphite (iv) Potassium sorbate (v) Enzymes (vi) Colour (vii) Egg white (viii) Flavours (ix) Sweeteners (x) Acidulants

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 3			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
		Generic	Cause- Effect	Work-sequence
	Matching item			
Complexity level:	C1			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	2 minutes			

Test Item	The following are steps in making must “Except”?
Distractors and correct answer	A. Extraction B. Sterilisation C. Clarification D. Pasteurisation

Key (answer)	C
--------------	---

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 4			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause- Effect	Work- sequence
Complexity level:	C1			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	2 minutes			

Test Item	Choose from the following alternatives, the reason for pasteurising must?
Distractors and correct answer	A. To improve colour B. To improve flavour C. To allow clarification D. To kill micro- organisms

Key (answer)	D
--------------	---

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 5			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
		√		
Complexity level:	C2			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	3 minutes			

Test Item	Match the following tools and equipment of wine making with their uses
------------------	--

Column A (Tools and Equipment)	
A	Air lock
B	Extractor
C	Expresser
D	Vinometer

Column B (Activity)	
1	Measuring alcohol content
2	Cleaning materials
3	Releasing Co ₂
4	Making pulp
5	Making juice
6	Measuring temperature
7	Filtering wine

Key (answer)	A-3, B-4, C-5, D-1
---------------------	--------------------

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 6			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause-Effect	Work-sequence
		√		
Complexity level:	C2			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	3 minutes			

Test Item	Match the following tools with the parameters they measure
------------------	--

Column A (Tools)	
A	Refractometer
B	Weighing scale
C	Vinometer
D	Thermometer
E	pH meter

Column B (parameter)	
1	Acidity
2	Alcohol content
3	Temperature
4	Weight
5	Fermentation time
6	Colour
7	Sugar level

Key (answer)	A-7, B-4, C-2, D-3, E-1
---------------------	-------------------------

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 7			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
			√	
Complexity level:	C2			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	3 minutes			

Test Item	Match the following faults in wine making with their causes
------------------	---

Column A (faults)	
A	Vinegar test in wine
B	Failure to ferment
C	Secondary fermentation
D	Turbid wine

Column B (causes)	
1	Un pasteurised must
2	Reduced sugar and yeast
3	Un clarified wine
4	Acetobacter
5	Filtered wine
6	Treated water

Key (answer)	A-4, B-1, C-2, D-3,
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DIT/ QS	Test Item Database Written (Theory) Test Item- no. 8			
Occupational Title:	Wine Maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
				√
Complexity level:	C2			
Date of OP:	September 2020			
Related module:	M1.2			
Time allocation:	3 minutes			

Test Item	Arrange the steps followed when fermenting must
-----------	---

Column A (chronology)	Column B (work steps) in wrong chronological order	
1 st	A	Stop fermentation
2 nd	B	Pasteurise must
3 rd	C	Prepare additives
4 th	D	Monitor fermentation process
5 th	E	Prepare sugar syrup
6 th	F	Test must parameters
7 th	G	Weigh ingredients
8 th	H	Extract must

Key (answer)	1-G, 2-E, 3-H, 4-F, 5-B, 6-C, 7-D.
--------------	------------------------------------

DIT/ QS	Test Item Database Written (Theory) Test Item- no.9			
Occupational Title:	Wine maker			
Competence level:	1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
				√
Complexity level:	C2			
Date of OP:	September 2020			
Related modules:	M1.2			
Time allocation:	2 minutes			

Test Item	Arrange the steps followed when preparing must?
-----------	---

Column A (Chronology)	Column B (work steps) in wrong chronology order	
1 st	A	Grade fruits
2 nd	B	Extract must
3 rd	C	Test parameters
4 th	D	Weigh materials
5 th	E	Clean fruits

Key (answer)	1-A, 2-E, 3-D, 4-B, 5-C
--------------	-------------------------

PERFORMANCE TEST ITEMS (SAMPLES)

DIT/ QS	Test Item Database Performance Test Item- no. 10
Occupational Title:	Wine Maker
Competence level:	1
Code no.	
Test Item:	Using fruits, prepare and inoculate a must
Complexity level:	P3
Date of OP:	September 2020
Related modules:	M1.1
Related skills and knowledge:	<ul style="list-style-type: none"> ▪ Hygiene ▪ Operation of machinery ▪ Occupational safety ▪ Literacy and numeracy ▪ Product standardisation ▪ Water treatment methods ▪ Quality control ▪ Storage ▪ Packaging ▪ Sterilising equipment ▪ Cleaning methods
Required tools, Materials and Equipment:	Fermentation jars and tanks, pans/boilers, blenders, filters, refractometer, pH meter, buckets, packaging materials, weighing scale, tables, protective wear, vinometer, Juicer, pans, knives, heat source, sieves, brushes, brooms, funnel, measuring cylinder, extractors
Time allocation:	1 hour
Preferred venue:	Winery
Remarks for candidates	<ul style="list-style-type: none"> ▪ Wear protective gear
Remarks for assessors	<ul style="list-style-type: none"> ▪ The assessor should make sure that the assessee is availed with tools and equipment (apiary) ▪ Allow helper
Special notes	Equipment should be clean and dry

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
1	Preparation for Task	Observe personal hygiene		2
		Wore protective gear <ul style="list-style-type: none"> • Gumboots • Gloves • Over coat • Face mask • Head gear 		4
		Cleaned working area	2	
		Clean work area observed		2
		Assembled tools and equipment	2	
		Cleaned tools and equipment		2
		2	Preparation of materials	Assembled materials
	Sorted fruits	1		
	Washed fruits	2		
	Weighed fruits	2		
	Extracted juice / pulp			2
	Homogenous extract observed			4
	Weighed extract	2		
3	Preparation of must	Tested sugar	4	
		Balanced must pH	2	
		Use of dilutes observed		2
		Homogenous must observed		2
		Pasteurised must	2	
		Use of heating medium observed		2
		Cooled must	2	
		Measured temperature	2	
4	Inoculating	Measured yeast	2	

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#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Propagated yeast	2	
		Activated yeast observed		2
		Measured must temperature	2	
		Diluted yeast	2	
		Inoculated must	2	
		A third head space observed		2
		Functional air lock observed		2
		Placed fermentation jar on pallet/ racker in a warm place	2	
		In process cleaning observed		3
5	Post process cleaning	Cleaned tools and equipment	2	
		Stored tools and equipment	2	
		Disposed waste	2	
		No waste observed		2
		Cleaned working area	2	
		Clean working area observed		2
		Removed protective gear	2	
	TOTAL		45	37
	MAXIMUM SCORE (Y)	X/Y	X/Y X100%	

4.0 ATP- PART IV

INFORMATION ON DEVELOPMENT PROCESS

4.1 Occupational Profile Developed (September 2020)

The Occupational Profile was exclusively developed by job practitioners who were working in the Wine maker occupation. The job expert panel, guided by UVQF Facilitators defined duties and tasks performed and provided additional generic information regarding the occupation.

4.2 Training Module Developed (September 2020)

Based on the Occupational Profile for Wine maker of September 2020, Training Modules were developed by job practitioners, guided by UVQF Facilitators.

4.3 Test Item Development (September 2020)

Based on the Occupational Profile for Wine maker of September 2020, and Training Modules, Test Items were developed by combined panels of instructors and job practitioners, guided by UVQF Facilitators.

4.4 Methodology

The rationale for the Assessment and Training Package review was to link Vocational Education and Training to the real world of work by bridging Occupational Standards to Training Standards through industry-led Standards-Based Assessment.

Active participation of both instructors and job practitioners' panels consolidated the review philosophy.

The panellists worked as teams in workshop settings complemented by off-workshop field research and literature review activities including international benchmarking.

4.5 Reviewing Panel

The participating panel of Job Practitioners required for different stages of the assessment training package i.e. occupational profile, training modules, assessment instruments were constituted by members from the following organisations;

No.	Name	Institution/ Organisation
1.	Lwasampijja Michael	Bbaale S. S
2.	Namiiro Zerida	Mable S. S
3.	Kafeero Joel	Maska S. S
4.	Najja Sylvia	Iganga S. S
5.	Adhum Andera Elizabeth	New Nebem Enterprise Ltd
6.	Grace Muhoozi	Kyambogo university
7.	Ssentamu Pascal	The Senta for Industrialisation
8.	Ssempijja Lawrence	Sheba Cottage Winery
9.	Nansikombi Phionah	Bukoyo S. S Iganga
10.	Lukedde Francis B	Nina Wine
11.	Geoffrey Sempiri	Jeorge Botanicals
12.	Naiga Zulaika	Ministry of Education and Sports

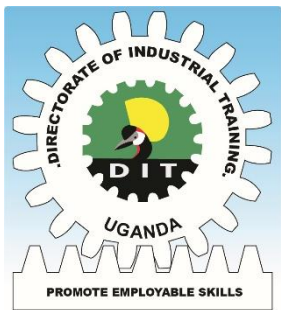
4.6 Facilitator team

This Assessment and Training Package was reviewed by a Facilitator team listed below:

1. **Team Leader:** Ms Mukyala Ruth, Ag Deputy Director, DIT
2. **Facilitators:** Mr Kilabira Yusuf, Mr Nyanja John Fisher,
3. **Data entrants:** Ms Eyoru Gladys Nicolette, Ms Kaudha Agnes, Namazi Monica.
4. **Coordinated by:** Mr Byakatonda Patrick, Ag. Director, DIT;

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