

PRODUCE DYED TEXTILES

UNIT CODE: ENG/OS/TXP/CR/02/5/A

UNIT DESCRIPTION

This unit describes the competencies required by a textile processing craft person to produce dyed textiles. It involves competencies required to obtain textile for dyeing, prepare dyeing recipe, set up dyeing machine, carry out dyeing, carry out washing off and document dyeing process.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
<p>These describe the key outcomes which make up workplace function</p>	<p>These are assessable statements which specify the required level of performance for each of the elements <i>(Bold and italicized terms are elaborated in the Range)</i></p>
<p>1 Obtain Textile Material for Dyeing</p>	<p>1.1 Work order is received and interpreted according to customer requirements</p> <p>1.2 Requisition for textile material is prepared and issued according to organisational procedures</p> <p>1.3 Textile material is obtained according to organisational procedures</p> <p>1.4 Textile material sample is delivered to laboratory for analysis according to organisational procedures</p>
<p>2 Prepare Dyeing Recipe</p>	<p>2.1 Safety is observed according to OSH act</p> <p>2.2 Standard sample and/or pantone shade card is obtained according to organisational procedures</p> <p>2.3 Dyeing recipe components are obtained according to organisational procedures</p> <p>2.4 Dyeing stuffs are weighed separately on precision balance according to organisational procedures</p> <p>2.5 Dyeing recipe is developed with details like dyeing cycle and material to liquor ratio (MLR)</p> <p>2.6 Shade developed is checked against standard sample shade</p> <p>2.7 Equipment is monitored for smooth process according to organisational procedures</p>
<p>3 Set Up Dyeing Machine</p>	<p>3.1 Safety is observed according to OSH act</p> <p>3.2 Machine operation manual is obtained according to organisational procedures</p> <p>3.3 Necessary tools and consumables are obtained according to operation manual</p>

	<p>3.4 Textile material beam is obtained according to product specifications.</p> <p>3.5 Pre-treated beam is mounted onto dyeing machine according to manufacturer's manual and product design.</p> <p>3.6 Dyeing machine parameters are set up according to operation manual</p>
4 Carry Out Dyeing	<p>4.1 Safety is observed according to OSH act</p> <p>4.2 Textile material is loaded onto dyeing machine according to operation procedure</p> <p>4.3 Dyeing machine parameters are set according to operation manual</p> <p>4.4 Dyeing machine is operated according to operation procedures</p> <p>4.5 <i>Dyeing process parameters</i> is monitored according to SOP.</p> <p>4.6 <i>Dyeing faults</i> are identified and rectified where possible according to SOP</p> <p>4.7 Dyed fabric rolls are doffed according to SOP.</p> <p>4.8 Dyed fabric rolls are stored according to organizational procedures.</p>
5 Carry Out Washing Off	<p>5.1 Safety is observed according to OSH act</p> <p>5.2 Washing recipe is prepared according to organisational procedures</p> <p>5.3 Textile material is loaded onto washing machine according to operation procedure</p> <p>5.4 Washing machine parameters are set according to operation manual</p> <p>5.5 Washing machine is operated according to operation procedures</p> <p>5.6 Washing process is monitored according to SOP.</p> <p>5.7 <i>Washing faults</i> are identified and rectified where possible according to SOP</p> <p>5.8 Washed textile material rolls are doffed according to SOP.</p> <p>5.9 Washed textile material rolls are stored according to organizational procedures.</p>
6 Document Dyeing Process	<p>6.1 Documentation tools are obtained according to organisational procedures</p> <p>6.2 Dyeing quality control tests are documented according to organisational procedures</p>

	6.3 Dyeing process is documented according to organisational procedures
	6.4 Report is generated according to organizational procedures

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Textile material may include but is not limited to:	<ul style="list-style-type: none"> • Yarn • Fabric
2. Necessary tools and consumables may include but is not limited to:	<ul style="list-style-type: none"> • Oil • Grease
3. Dyeing process parameters may include but is not limited to:	<ul style="list-style-type: none"> • Speed of machine • Chemical recipe • Steamer temperature • Steamer dwelling
4. Dyeing faults may include but is not limited to:	<ul style="list-style-type: none"> • Uneven dyeing • Dye spot • Shade variation
5. Washing faults may include but is not limited to:	<ul style="list-style-type: none"> • Poor smell • Poor brightness • Poor hand feel • Over blasting

REQUIRED KNOWLEDGE

The individual needs to demonstrate knowledge of:

- Dyeing process, faults and remedies
- Machine parts and components
- Machine faults
- Machine parameters
- Standard operating procedures(SOP) of dyeing
- Dyeing recipe
- Chemical neutralization
- Dyeing methods

- Washing methods
- Fabric quality
- Safety practices and procedures
- Documentation
- Procedure for safe disposal of waste materials
- Mathematics understanding
- Physics

REQUIRED SKILLS

The individual needs to demonstrate skills in:

- Perform dyeing process
- Check dye faults and remedies
- Observe safety
- Prepare dyeing recipe
- Adjust machine parameters
- Check pick up of fabric
- Machine operation
- Planning and sequencing tasks
- Identifying non-compliances
- Effective communication skills– oral/written
- Data collection
- Manage work efficiently
- Time management
- Supply chain operations
- Sense color effectively
- Troubleshooting
- House keeping
- Energy conservation
- Good decision making
- Time management
- Report writing
- Record keeping

EVIDENCE GUIDE

This provides advice on assessment and must be in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency.	1.1 Obtained textile for dyeing 1.2 Prepared dyeing recipe 1.3 Set up dyeing machine 1.4 Carried out dyeing 1.5 Carried out washing off 1.6 Documented dyeing process.
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2. Resource Implications.	2.1 Fabric 2.2 Yarn 2.3 PPE 2.4 Dyes and chemicals 2.5 Dyeing machine 2.6 Washing chemicals 2.7 Thermometer 2.8 Pantone shade card 2.9 Documentation tool and equipment
3. Methods of Assessment.	<i>Competency may be assessed through:</i> 3.1 Practical 3.2 Observation 3.3 Questionnaire 3.4 Case studies 3.5 Written examinations 3.6 Oral presentation
4. Context of Assessment.	Competency may be assessed individually in an actual workplace or in work-simulated conditions within accredited institutions or during industrial attachment.
5. Guidance information for assessment.	This unit may be assessed on an integrated basis with others within this occupational sector.