

**Specification of Competency Standards
for the Manufacturing Technology Industry
Unit of Competency**

Functional Area - Product Quality Control and Testing

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| Title | Formulate product sampling plan and statistical process control methods (SPC) |
| Code | 106536L4 |
| Range | This unit of competency is applicable to all corporations of manufacturing technology industry. Practitioners should be capable to formulate product sampling plan in accordance with special characteristics and statistic process control methods |
| Level | 4 |
| Credit | 6 (For Reference Only) |
| Competency | <p>Performance Requirements</p> <ol style="list-style-type: none"> 1. Understand relevant knowledge of statistics, principles and applications of statistical tools <ul style="list-style-type: none"> • Understand the sampling methods and techniques of Acceptance Quality Level (AQL) • Understand the foundation statistics, including standard deviation, frequency distribution, and normal distribution etc • Understand all kinds of principles and applications of statistical and analytical tools , including the cause and effect diagram, -R control chart (average range), p control chart (failure rate), np control chart (number of defects) and c control charts 2. Formulate product sampling plan and statistic process control methods (SPC) <ul style="list-style-type: none"> • According to the product's key size , coordination of human resources, customers quality requirements, cost factors, formulate an appropriate product sampling plan • According to the poor quality records of customers and the corporation, regularly revise the product sampling plan • Select the appropriate statistical process control methods, and apply to the production line • Analyze the data trend of the product by statistics and analysis tools, so as to make appropriate adjustments 3. Professional handling of formulating product sampling plan <ul style="list-style-type: none"> • Detailedly consider the elements of risk, productivity, quality and cost etc, formulate product sampling plan and statistic process control methods (SPC) and at the same time meet all requirements |
| Assessment Criteria | <p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> • Capable to formulate product sampling plans for different products and regularly revise the product sampling plan in accordance with the poor quality records of customers and the corporation, • Capable to analyze the data trend of the product by statistics and analysis tools, and carry out monitor and make adjustments |
| Remark | |