Perform sample analysis



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Overview

This standard is for those who analyse samples and evaluate the production implications of producing the same or similar products.

The job role may involve:

- 1. Identifying materials and components
- 2. Recommending appropriate machinery and equipment to re-produce the sample product
- 3. Evaluating the prototype sample

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Performance criteria

You must be able to:

- P1 prepare the work area and equipment required for sample analysis
- P2 analyse the sample following the agreed procedure
- P3 determine the structure of the sample and the materials it is made of
- P4 evaluate the outcomes of the sample analysis
- P5 evaluate the sample against production capabilities
- P6 identify materials needed for sample production
- P7 identify the appropriate machinery for sample production
- P8 assess the feasibility of producing the product cost-effectively
- P9 present production recommendations and contribute to the decision making process
- P10 produce a sample prototype specification
- P11 ensure that machinery is set up in accordance with requirements and that the correct materials and components are available for sample production
- P12 ensure that samples are produced following approved procedures within agreed timescales
- P13 check sample production against specification
- P14 identify solutions to overcome problems in sample production
- P15 suggest modifications to sample specifications and samples to meet requirements
- P16 contribute to sample approval procedures
- P17 make recommendations about the most cost-effective methods of bulk production for the new product
- P18 produce accurate and complete records of sample evaluation and production process
- P19 store sample and records in accordance with company procedures

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Knowledge and understanding

You need to know	w and
understand:	

- K1 how to receive work instructions and specifications and interpret them accurately
- K2 how to make use of the information detailed in specifications and instructions
- K3 sample analysis techniques
- K4 appropriate equipment and materials for sample analysis
- K5 the characteristics of materials and their properties
- K6 methods of calculating production resource requirements
- K7 components of a product specification
- K8 technical aspects of product development
- K9 impact of customer requirements on production
- K10 compatibility of machine and product
- K11 limits of personal responsibility and lines of communication
- K12 organizational procedures for sample production
- K13 sample costing methods
- K14 sample development methods
- K15 content of a sample specification
- K16 alternative methods of production
- K17 ways of adjusting specifications within machine capabilities and cost constraints
- K18 the importance of achieving quality and its relation to the end user / customer
- K19 safe working practices and organisational procedures
- K20 limits of your own responsibility
- K21 ways of resolving with problems within the work area
- K22 the production process and how your specific work activities relate to the whole process
- K23 the importance of effective communication with colleagues
- K24 the lines of communication, authority and reporting procedures
- K25 the organisation's rules, codes and guidelines (including timekeeping)
- K26 the companies quality standards
- K27 the types of records kept, how are they completed and the importance of keeping them accurate
- K28 the importance of complying with written instructions
- K29 equipment operating procedures / manufacturers' instructions
- K30 statutory responsibilities under Health, Safety and Environmental legislation and regulations

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