
Overview

This standard exists within a research and development role and covers the competences you need to design the scale-up process for explosive substances and/or articles in accordance with approved procedures and practices.

You will be required to demonstrate that you can develop and validate new processes, techniques and equipment in line with regulatory guidelines.

Ensuring that your scale-up design demonstrates reproducibility, with the required properties in accordance with approved procedures and practices.

This activity is likely to be undertaken by someone whose work role involves Ordnance, Munitions or Explosives work activities. This includes people working as research leaders, design managers and development managers and researchers, designers and developers.

This standard replaces COGESA1.17.

Performance criteria

You must be able to:

P1 work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines

P2 establish the evaluation criteria to determine the success of the scale-up

P3 assess the suitability of existing processes, techniques, and plant and equipment

P4 explore the possibility of adapting existing processes, techniques and equipment before new ones are developed

P5 develop and validate new processes, techniques and equipment in line with regulatory guidelines

P6 ensure that your scale-up design demonstrates reproducibility, with the required properties

P7 write clear and concise process procedures

P8 document fully the rationale and the choice of processes, techniques and equipment

P9 report your findings, in the correct format

Knowledge and understanding

You need to know and understand:

K1 the health, safety and environmental and other statutory legislation, regulations and safe working practices and procedures governing explosives, and their implications for your area of work

K2 the relevance of personal protective equipment (PPE)

K3 the nature, characteristics, hazards and risks of the explosive substances and or articles

K4 the actions to be taken in response to an unplanned event

K5 the research programme and plan

K6 the required properties of the substance(s) being scaled up

K7 the range of possible processes, and their advantages and disadvantages

K8 the critical factors in scale-up processes

K9 the available facilities and equipment, and their constraints

K10 the competences of the personnel involved

K11 the information needed to draw up processing procedures

K12 whom to consult, and where to go for further advice

K13 methods for evaluating the fitness for purpose of the processes, techniques, plant and equipment

K14 methods for evaluating the success of the scale-up

K15 problem solving techniques

K16 the impact of the cost of developing or adapting new processes, techniques, plant and equipment

K17 the documentation requirements

K18 how to consign residues and other products for disposal

Scope/range

These standards may be limited by the following;

1. Suitability: cost; safety
2. Resources: limited; full

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Original URN	This standard replaces COGESA1.17.
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Suite	Explosive Substances and Articles: Research, Design and Development
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