SFHCHS194
Extract DNA/RNA for analysis

Overview

This standard relates to the extraction of DNA/RNA from a range of specimens for analysis.

Users of this standard will need to ensure that practice reflects up to date information and policies.

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Performance criteria

You must be able to:

P1 follow the appropriate standing operating procedures, policies and protocols for the method of extraction and biological containment level
P2 select and use the appropriate technique to extract DNA/RNA for relevant analysis and tests to be performed
P3 ensure the DNA/RNA extraction is undertaken in an environment to prevent contamination with none sample DNA/RNA
P4 check the extraction is of the appropriate quality and purity for analysis and tests to be performed
P5 transfer extracted DNA/ RNA to a container of correct type and size
P6 label the container accurately, clearly and legibly with complete and correct data set
P7 place extracted DNA/RNA in correct location and conditions for the next stage of processing
P8 work within your personal scope of practice
P9 complete all relevant records accurately and in accordance with protocols
P10 take appropriate action to respond to an unexpected situation, problem or event

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Knowledge and understanding

You need to know and understand:

K1 the relevant standard operating procedures, statutory, regulatory and legislative

K2 different preparation methods for reagents, materials and equipment for use in the extraction of DNA/RNA and which to apply under different circumstances

K3 acceptance and rejection criteria for DNA/RNA extractions

K4 the importance of ensuring that extractions are accurately labelled, in accordance with requirements such as local labelling policies

K5 volume of DNA/RNA samples required for different circumstances and other related protocols for samples

K6 the range of extraction procedures and associated equipment, and which to apply under different circumstances

K7 the purpose, process, capabilities and limitations of extraction procedures and associated equipment

K8 requirements for containment levels and the importance of adhering to these

K9 the quality and purity of DNA/TNA required for each test to be performed and how to check that quality and purity

K10 factors affecting the quality and purity of extractions, and how to optimise these

K11 types of container suitable for extraction, transfer and storage

K12 where to place extractions for next stage of processing

K13 relevant processes and requirements regarding records and documentation associated with extractions

K14 methods and techniques for DNA/RNA quantification and how to apply these

K15 contingency and risk assessments relating to extraction of DNA/RNA

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Additional Information

External Links

This standard links with the following dimension within the NHS Knowledge and Skills Framework (October 2004):

Dimension: HWB8 Biomedical investigation and intervention

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