Forensic and Scientific Services

05/08/2008

Automated DNA Extraction with the DNA IQ™ Kit Training Module

1 PURPOSE

After successful completion of the assessment of this module, the staff member will have provided evidence showing the required knowledge and understanding of the automated DNA extraction process using the DNA IQ Kit within the Analytical section of DNA Analysis.

2 PREREQUISTE TRAINING MODULES

QIS 24450 Operation and Use of the MultiPROBE® II PLUS HT EX Robotic Platform Training Module

QIS 24471 AUSLAB Batch Functionality Analytical Scientists Training Module

3 TRAINING PROTOCOL & ASSESSMENT

The Expected Time frame to achieve competency in this module is 2 weeks

- Read the associated documentation and references.
- Discuss the key issues with a competent trainer.
- Observe and assist the competent trainer with the procedure.
- Perform the procedure under supervision.
- Perform the assessment.

Element of competency		Key Performance Criteria		Assessment Type
1.	Principle of DNA IQ™ Kit	1.1	Chaotropic salts/agents	WQ
		1.2	Proteinase K	WQ
		1.3	Dithiothreitol (DTT)	WQ
		1.4	DNA IQ™ resin	WQ
		1.5	DNA IQ™ modifications	WQ
		1.6	Washing	WQ
		1.7	Elution	WQ
2.	Safety requirements and Quality Control	2.1	Biohazardous material and safety precautions	Ob, WQ
		2.2	Quality controls	WQ, OQ
		2.3	Decontamination	Ob, WQ
3.	Actions – Off-Deck Lysis	3.1	Batch labelling	Ob, WQ
		3.2	Reagent preparation	Ob, WQ
		3.3	Standard & Retain Supernatant	Ob, WQ
		3.4	Use of Spin baskets	Ob, WQ
4.	Actions - Automated Method	4.1	Using the MP II platform	Ob, WQ
		4.2	Labware required	Ob, WQ
		4.3	Reagent Preparation	Ob, WQ
5.	Actions - AUSLAB	5.1	AUSLAB	Ob, WQ
		5.2	Platemaps	WQ
		5.3	Worksheets	Ob, WQ
		5.4	Importing Files	Ob, WQ

Assessment Type

6.1 Training Checklist

	Trainer name, signature and date	Trainee name, signature and date
Documentation • QIS 24897R___ • QIS 17120R___		
Associated Safety Discussed • DNA IQ™ MSDS		
Training Resources • MultiPROBE® II PLUS HT EX with Gripper Integration Platform • Nurthen, T., Hlinka, V., Muharam, I., Gallagher, B., Lundie, G., Iannuzzi, C. "Project 11: Report on the Validation of the Automated Extraction Chemistry Kit using the MultiPROBE® II PLUS ht ex with Gripper™ Integration Casework Platform." 2007. • Nurthen, T., Hlinka, V., Muharam, I., Gallagher, B., Lundie, G., Iannuzzi, C. "Project 13: Report on the Verification of the Automated Extraction Chemistry Kit using the MultiPROBE® II PLUS HT EX with Gripper™ Integration Casework Platform." 2007. • Huston, K, "DNA IQ™ System "Frequently Asked Questions"", www.promega.com, Profiles in DNA, Feb 2002		
Key Performance Criteria		

Comments

Extraction Batches (MPII)

	Batch ID	Date	Name and signature of trainer	Comments	Mode of Training
1					Demonstration
2					Observation
3					Observation
4					Observation
5					Observation
6					Observation

NOTE: at least one batch with SlicPrep™ 96 device and one batch without must be observed and performed under observation

Question 16 (KPC 3.2)
What reagents are included in the extraction buffer for a normal off-deck lysis batch?

Question 17 (KPC 3.2)
How often and why do you prepare Extraction Buffer?

Question 18 (KPC3.2)
Why is 40% Sarcoysl added to the extraction buffer? What is its mechanism?

Question 19 (KPC 3.2 & 3.3)
For retained supernatant off-deck lysis batches, in what order are the reagents added to the sample tubes, and the incubations of these performed? How and why does this differ from a normal off-deck lysis batch?

Question 20 (KPC 3.3)
Explain briefly what the main steps of an off-deck lysis are and they difference between a retain supernatant off-deck lysis batch?

Question 21 (KPC 3.4)
During the transferring of substrates, what substrates require:

(i) spin baskets
(ii) 1.5mL tubes

Question 22 (KPC 4.1)
Explain where and why fixed versa tips are used rather than disposable tips.

Question 23 (KPC 2.1, 4.1 & 4.3)
What safety procedures must be followed to ensure safety of the MPII user?

Question 24 (KPC 4.1)
Explain why decontamination of the instrument deck and labware and surrounding area is necessary and what chemicals can be used.

Question 25 (KPC 4.2)
List the positions and orientations of barcodes on the labware where barcodes are required?

Question 26 (KPC 4.3)
How often and why do you prepare Lysis Buffer?

Question 27 (KPC 4.3)
When do you prepare the Wash buffer?

Question 28 (KPC 5.1 & 5.4)
Briefly outline the role that AUSLAB has in the off-deck process process.

Question 29 (KPC 5.1 & 5.4)
Briefly outline the role that AUSLAB has in the automated extraction process.

Question 30 (KPC 5.2)
What information is contained on the Worksheet and where is it stored after the completion of the off-deck lysis batch?

6.3 Record of Assessment

	Key Performance Criteria	Part A		Part B		Part C	
		Trainer & Date	Result	Assessor & Date	Result	Trainer & Date	Result
1.1	Chaotropic salts/agents	N/A					
1.2	Pro K	N/A					
1.3	Dithiothreitol (DTT)	N/A					
1.4	DNA IQ™ resin	N/A					
1.5	DNA IQ™ modifications	N/A					
1.6	Washing	N/A					
1.7	Elution	N/A					
2.1	Biohazardous material and safety precautions						
2.2	Quality controls						
2.3	Worksheets						
3.1	Batch labelling						
3.2	Reagent preparation						
3.3	Standard & Retain Supernatant						
3.4	Use of Spin baskets						
4.1	Using the MP II platform						
4.2	Labware required						
4.3	Reagent Preparation						
5.1	AUSLAB						
5.2	Platemaps						
5.3	Worksheets						
5.4	Importing Files						

NYC = Not yet competent
C= Competent

CTT= Competent to train
N/A = Not Applicable

Comments:

Trainee:

Name **Signature:** { CONTROL Forms.TextBox.1 \s } **Date completed:** { CONTROL Forms.TextBox.1 \s }

Training Coordinator

Name:{ CONTROL Forms.TextBox.1 \s } **Signature**: { CONTROL Forms.TextBox.1 \s }
Date completed: { CONTROL Forms.TextBox.1 \s }

{ CONTROL Forms.CheckBox.1 \s }{ CONTROL Forms.CheckBox.1 \s }
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