

DNA Analyst Training
Laboratory Training Manual

Training Completion Form

Colorado Bureau of Investigation

Training Completion Form

Subject 3: DNA Extraction and Quantitation

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 03: DNA Extraction and Quantitation	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 3: DNA Analysis Considerations		
	Read knowledge base content		
	Objective 2: Successfully complete content review for Subject 3: Organic Extraction		
	Read knowledge base content		
	Objective 3: Successfully complete content review for Subject 3: Automate Prepfilers Express		
	Read knowledge base content		
	Objective 4: Successfully complete content review for Subject 3: Other Extraction Techniques		
	Read knowledge base content		
	Objective 5: Successfully complete literature Review for Subject 2-Extractions		
	Literature Review (maintain a list of all literature reviewed)		
	Objective 6: View Lectures/Operator's Training		
	Lecture: History of the DNA Quality Assurance Standards		
	Lecture: Extraction Methods (Organic and Automate Prepfilers Express)		
	Review Applied Biosystems Operator Training Manual for the Automate and 7500		
	Objective 7: Successfully complete content review for Subject 3: Quantitation		
	Read knowledge base content		
	Objective 8: Successfully complete literature Review for Subject 2-qPCR		
	Literature Review (maintain a list of all literature reviewed)		
	Objective 9: View Lecture		
	View Lectures: qPCR		

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Subject 3: DNA Extraction and Quantitation

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 03: DNA Extraction and Quantitation (continued)	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 10: Successfully perform exercises from Laboratory Training Manual Subject 3: Extraction		
	Exercise 1: Extraction of Known Single Source Samples (Prepfil and Organic)		
	Exercise 2: Differential Extraction of Mixed Samples		
	Exercise 3: Extraction of Known Compromised Samples		
	Exercise 4: Non-differential Extraction of Known Mixed Samples		
	Exercise 5: Extraction of Known Inhibited Samples		
	Exercise 6: Extraction of Known Hair Samples		
	Exercise 7: Centricon® /Microcon® / Vivacon Concentration of DNA		

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Trainee Name:	Trainee Identification Number:
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Subject 03: DNA Extraction and Quantitation (continued)	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 11: Successfully perform exercises from Laboratory Training Manual Subject 3: Quantitation		
	Exercise 8: Sample Preparation and Instrumentation		
	Exercise 9: Reproducibility of the Quantitation Method		
	Exercise 10: Quantitation of Previously Extracted Samples		
	Exercise 11: Calculations and Dilutions		

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Subject 4: DNA Amplification

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 04: DNA Amplification	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 4: Overview		
	Read knowledge base content		
	Objective 2: Successfully complete content review for Subject 4: Locus Selection		
	Read knowledge base content		
	Objective 3: Successfully complete content review for Subject 4: Multiplexing		
	Read knowledge base content		
	Objective 4: Successfully complete content review for Subject 4: Contamination		
	Read knowledge base content		
	Objective 5: Successfully complete literature Review for Subject 4-Amplification		
	Literature Review (maintain a list of all literature reviewed)		
	Objective 6: View Lecture		
	View Lecture: Amplification and Related Issues		
	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 7: Successfully perform exercises from Laboratory Training Manual Subject 4: DNA Amplification		
	Exercise 1: Thermal Cyclers (maintenance and calibration)		
	Exercise 2: Amplification of Dilution Series		
	Exercise 3: Amplification of Two Donor Mixed Samples		
	Exercise 4: Amplification of Previously Extracted Samples		

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Subject 5: Amplified Product Separation

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 05: Amplified Product Separation	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 5: Overview		
	Read knowledge base content		
	Objective 2: Successfully complete content review for Subject 5: Capillary Electrophoresis and Subject 9: Y STRs		
	Read knowledge base content		
	Objective 3: Successfully complete content review for Subject 5: Sample Preparation and Handling		
	Read knowledge base content		
	Objective 4: Successfully complete literature Review for Subject 5-Amplified Product Separation		
	Literature Review (maintain a list of all literature reviewed)		
	Objective 5: Attend Lectures/Operator's Training		
	Review Applied Biosystems Manual on 3500		
	Review Applied Biosystems Operator's Manual for GeneMapper® IDX Software		
	View Lecture: Capillary Electrophoresis		
	View Lecture: Sample Preparation and Initial Data Evaluation		
	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 6: Successfully perform exercises from Laboratory Training Manual Subject 5: Amplified Product Separation		
	Exercise 1: Instrument Maintenance		
	Exercise 2: Sample Run and Set-up		
	Exercise 3: Initial Data Evaluation		
Exercise 4: Practice Data Sets and Mock Cases			
Exercise 5: Variations in Injection Times			
Exercise 6: Variations in Amp Product			

Training Completion Form

Subject 6: STR Data Analysis and Interpretation

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 06: STR Data Analysis and Interpretation	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 6: STR Data Analysis & Interpretation		
	Read knowledge base content		
	Objective 2: Successfully complete content review for Subject 6: Data Troubleshooting		
	Read knowledge base content		
	Objective 3: Successfully complete content review for Subject 6: Data Interpretation and Allele Calls		
	Read knowledge base content		
	Objective 4: Successfully complete content review for Subject 9: Y-STRs		
	Read knowledge base content		
	Objective 5: Literature Review for Subject 6-STR Data Analysis & Interpretation		
	Literature Review (maintain a list of all literature reviewed)		
	Objective 6: Attend/View Lectures		
	Lecture: Autosomal STR Interpretation		
	Lecture: Y STR Interpretation		
	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 7: Successfully perform exercises from Laboratory Training Manual Subject 6: DNA Amplification		
	Exercise 1: Analysis Parameters		
	Exercise 2: Practice Data		
	Exercise 3: Data Evaluation		
Exercise 4: Data Interpretation			
Exercise 5: Conclusions			

Training Completion Form

Subject 7: Population Genetics and Statistics

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 07: Population Genetics and Statistics	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 7: Population Theory		
	Read knowledge base content		
	Objective 2: Successfully complete content review for Subject 7: Statistics		
	Read knowledge base content		
	Objective 3: Literature Review for Subject 6-STR Data Analysis & Interpretation		
	Literature Review (maintain a list of all literature reviewed)		
	Objective 5: Attend Lecture		
	Lecture: Population Genetics & Statistics		
	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 6: Successfully perform exercises from Laboratory Training Manual Subject 7: Population Genetics and Statistics		
	Exercise 1: Statistical Calculations		
	Objective 7: Successfully complete written Exam		
Exercise 1: Written Examination			

Training Completion Form

Unknown and Mock Sample Completion

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Unknown Sample Completion	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 1: Successfully complete analysis on all unknown samples		
	Complete unknown sample analysis		
	Objective 2: Successfully complete analysis on mock cases (screening and DNA)		
	Complete mock case analysis		
	Objective 3: Summarize genotypes for all known and unknown samples worked		
	Exercise 1: Provide summaries from unknown samples and mock cases for review		

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Subject 8: Communicating Results

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 08: Communication Results	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 8: Communications Skills		
	Read knowledge base content		
	Objective 2: Successfully complete content review for Subject 8: Report Writing		
	Read knowledge base content		
	Objective 3: Successfully complete content review for Subject 8: Courtroom Testimony		
	Read knowledge base content		
	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 4: Successfully perform exercises from Laboratory Training Manual Subject 8: Communication Results		
	Exercise 1: Preparation of Case Reports from Exercise Samples and Mock Cases		
	Exercise 2: Overview of Judicial Practices and Policies		
	Exercise 3: Observation of Testimony		
	Exercise 4: Preparation of Curriculum Vitae		
	Exercise 5: Mock Trial		
	Learning Objectives by Subject	Technical Leader Approval	Completion Date
	Objective 5: Lectures/Literature		
Lectures: Communications and Trial Presentation			
Literature Review (maintain a list of all literature reviewed)			

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Subject 9: Other DNA Markers & Technologies

Laboratory: Colorado Bureau of Investigation	
Trainee Name:	Trainee Identification Number:
Technical Leader: Sarah Lewis	Location:

Subject 09: Other DNA Markers & Technologies	Learning Objectives by Subject	Instructor/Trainer Approval	Completion Date
	Objective 1: Successfully complete content review for Subject 9: Other DNA Markers & Technologies		
	Read knowledge base content		