



**The College of Graduate Studies and the College of science
Cordially Invite You to a**

Master Thesis Defense

Entitled

***Validation Study At Dubai Police Forensic Laboratory For Qiagen
Investigator Argus Y-28***

by

Afnan Mohammed Alshamsi

Faculty Advisor

Advisor: Prof. Rabah Iratni ,Co-advisor: Dr. Rashed Alghafri

Department of Biology

College of Science

Date & Venue

10 June

Abstract

Short tandem repeats polymorphisms on the male-specific part of the human Y-chromosome

(Y-STRs) are significant apparatuses in numerous spaces of human hereditary qualities. In spite of the fact that their fatherly legacy and moderate transformation rate ($\sim 10^{-3}$ changes per marker per meiosis) permit distinguishing fatherly connections, they ordinarily neglect to isolate male family members. Already, we introduced Qiagen investigator Argus Y-28 Kit which include 28Y-STR loci(DYS389I ,DYS391 ,DYS389II ,DYS533 , DYS390 ,DYS627, DYS458 , DYS393, DYS19, DYS437, DYS449 , DYS460, DYS576, YGATAH4, DYS481, DYS448, DYS518, DYS439, DYS549, DYS438, DYS456, DYS643, QS1, DYS570, DYS635, DYS385, DYS392, QS2). The internal validation study used in the forensic laboratories which followed sensitivity study, Mixture Studies, pcr parameter limits ,stability study, and performance on mock casework samples. we report the results by statistical analysis using ANOVA .The results validate the kit's robustness, reliability, and suitability as an assay for human identification with casework DNA samples . We expect this kit, improving male relative differentiation in future human hereditary applications.

Keywords: Y- chromosome ,STR, internal validation ,casework samples, forensic ,PCR , Qiagen kit