



UPPSALA
UNIVERSITET

Molecular Biotechnology Programme

Uppsala University School of Engineering

UPTEC X 07 033		Date of issue 2007-06
Author Carl-Olof Joachimsson		
Title (English) Validation of AmpFℓSTR[®] Yfiler[™] and evaluation of the use of Y-STR analysis in forensic casework in Europe		
Title (Swedish)		
Abstract <p>Y-chromosomal short tandem repeat (Y-STR) analysis is a new and expanding field in forensic science. AmpFℓSTR[®] Yfiler[™] amplifies 17 polymorphic Y-STR loci in one single multiplex reaction. The kit was shown to be able to detect male DNA with a high success rate even at low amounts of male DNA (63 pg). The amplification was shown to be specific to male DNA, and male DNA was successfully amplified even in the presence of excess female DNA (ratio 1:1000). In a comparison study with PowerPlex[®]Y, another Y-STR kit on the market, Yfiler[™] was shown to have a lower drop-out ratio and displayed a higher discriminatory power than PowerPlex[®]Y. Evaluation on the use of Y-STR analysis in Europe showed that the need for international guidelines and standards for database searches and haplotype frequency calculations is apparent.</p>		
Keywords Y-STR, Yfiler [™] , PowerPlex [®] Y SWGDAM core set, forensic science, male DNA typing		
Supervisors Christina Valgren Marianne Mattsson Senior Molecular Biologist, SKL Senior Forensic Expert, SKL		
Scientific reviewer Ricky Ansell, Ph.D. Forensic Adviser, SKL		
Project name	Sponsors	
Language English	Security	
ISSN 1401-2138	Classification	
Supplementary bibliographical information	Pages 50	
Biology Education Centre Box 592 S-75124 Uppsala	Biomedical Center Tel +46 (0)18 4710000	Husargatan 3 Uppsala Fax +46 (0)18 555217