

Fact sheet – Match Reports from the National DNA Database

The Swedish Police keep a database containing DNA profiles from crime scenes, suspects and convicted offenders. The National Police Board (RPS) is the custodian of the DNA database, and the Swedish National Laboratory of Forensic Science (SKL) are commissioned to administer the DNA profiles and to provide the assignors with the results from registrations and searches of DNA profiles from persons and crime scene samples (match reports).

Database matches

A match consists of a combination of a search sample and a matching sample that has a common DNA profile. The match is the result of an automatic comparison of DNA profiles in the database of crime scene samples, suspects and convicted offenders and is reported in a match report. Normally, SKL performs registrations and searches on a daily basis. A match report may contain one or several matches. It is possible that the crime scene samples/person involved in the match report derive from cases that have not been finally presented from the laboratory. Before registering, the laboratory makes an assessment if the crime scene sample might come from a perpetrator or in another way might facilitate that the crime is solved in a future possible match. If several crime scene samples in a case have the same DNA profile, the DNA profile from one of the crime scene samples are registered. Please observe that there can be further matching results of crime scene samples in the original written statement where the crime scene sample was investigated/DNA analysis was performed. Therefore, the match report must always be completed/supplemented with these original written statements.

The search sample is the DNA profile with the latest registration date and that has resulted in a match to one or several DNA profiles in the database, matching sample/samples. The search sample might derive from a person or from a crime scene sample. Only one search sample per match report is presented. The matching sample might derive from a person or from a crime scene sample in the database.

Personal data in the DNA database are handled and updated by the National Police Board (RPS). Therefore, the information about a person in the DNA database might differ from the information when the DNA sample was taken from the person and forwarded for analysis.

Conclusions in match reports

The common DNA profile for a search sample and a matching sample will be the basis for the statistical calculation of adventitious matches, which also constitutes the basis for the conclusion. The conclusions are based on the risk of an adventitious conformity of two unrelated persons. A reference database based on a selection of the Swedish population is the base for this statistical calculation. In the table below the conclusions, if one disregards the possibility that the DNA could originate from a close relative, are listed:

Conclusion	Level	Risk for adventitious matches between unrelated persons
The results extremely strongly support that....	Grade +4	maximum 1 in 1 million
The results strongly support that...	Grade +3	maximum 1 in 6.000
The results support that...	Grade +2	maximum 1 in 100

The expression “The results of the examination support that...” should be interpreted such that the results are more likely if the statements are correct than if they are not correct. The level indicates how likely the results are.

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The difference between a match report and a written statement

In a match report the result of automatic comparisons between DNA profiles in the DNA database is presented. In a written statement crime scene samples and persons in a case are compared manually. This means that mixtures and partial profiles could be compared to suspects in the case, which is not possible in an automatic search in the database, as mixtures and incomplete profiles are not registered. In the written statement both exclusions and matches of persons and crime scene samples within a case are presented. In the match report only matches are presented, i. e. negative search results are not reported. A match between a search sample and a matching sample in a match report means that none of the other DNA profiles in the database can have the same origin as the search sample and the matching samples. Thus, all other DNA profiles can be excluded.

A single result in a match report is equal to the matching result in a written statement. Thus, the result (the match) can not be more certain because it is the result of a comparison between DNA profiles from a crime scene sample and an appointed person in a case. The result reinforces possible connections between the crime scene sample and the person, without considering the result of the DNA analysis.

Method

The methods used to investigate crime scene samples that are included in the match reports are described in the written statement, where the crime scene sample was examined. After January 1, 2006, the methods B-SF03, B-SF06, B-M72 and B-M80 have been used for collecting buccal swab samples (FTA cards). The standard procedures (SF) and the methods (M) are part of the accreditation of the laboratory according to ISO/IEC 17025. The short codes for the standard procedures and the methods can be found on the SKL web page.

Who receives the match report?

The match report is reported with digital signature to the e-mail boxes for match reports that each police authority has stated/assigned:

- The authority that collected DNA sample from the person/persons. If a person is in the convicted offenders database, no match report is sent to the authority that collected DNA sample from the person.
- The authority that collected and sent the crime scene sample for investigation. The authority in which the crime was committed is sometimes different from the authority that collected the crime scene sample.
- The investigating officer who collected and sent the crime scene sample for investigation if the crime scene sample is the search sample.

Information on the Swedish Police Intranet

- <http://skl.skf.police.se/html/fakta/traffrapportertering> - SKL Web Page
- https://intrapolis.polisen.se/yoa556_101_660/Arbetsrum/Arbetsrum/Samverkan/00-Nationellt/Traffrapportsamordnare-dna---Samverkan-Gemensamt/ - Workroom

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