THE HUNGARIAN METHOD OF SCENT IDENTIFICATION LINE-UP

I. Introduction

Perpetrators could leave behind evidence at crime scenes. Therefore in the last decades committed approach were refined. Some of the perpetrators groups are trying to cover up their tracks at the crime scenes parallel with the technical development. Their intention is to hide those clues and material residuum at the crime scene that are capable to identify and reveal them. Contact with the environment is permanent. Every person leaves behind always his unique scent on the objects. Body odour also reflects the unique information about the human.

Service dogs are used in several fields by law enforcement agencies. With special training method dogs are able to sniff out explosives, drugs and they are able to compare human scent from each other alike. Numerous experiments showed scientifically that dogs are capable to discriminate the human scent including the scent of twins [1, pp. 549-554]. The forensic application is also demonstrated [2, pp.811-816].

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The human scent identification line-up uses the good sense of smell of dogs. Until the technical development will not reach to the level that it will be able to identify and compare the human scent with analytical method, the scent identification dog is the only one who is capable this task.

The method of identification line-up changed over the years. At first the scenting dog identified directly, the suspects were in the row and it chose from them (person selection method). This method was not reliable. The fear and other sign of physical reaction influenced the dog’s identification working. Since the seventies, the scent identification dog identifies and compares the scent trace that was leave behind by a perpetrator at the crime scene with sample scents that were collected from the suspect and other sample giving man in a line-up. Other samples (decoy) in the row give a choice for the dog [3, pp. 88-103].

Procedures are strictly regulating at national level. Regulations cover the collect, preserve and storage method of scent trace and scent sample. In Hungary the 22/2008 Directive of National Police Headquarter (hereinafter referred Directive) regulates the method.

In Hungary, the scent identification line-up was performed at Dunakeszi where dogs and dog-handlers are trained under the direction of National Police Headquarter. According to the current national legislation, scent identification line-up is a judicial procedure, while the scent collected from the crime scene is trace evidence.

II. The dog as a forensic tool

K-9 dogs (Ca-nine) used by law enforcement professionals. It has played an important role in legal investigations for decades. Dog’s excellent sense of smell was recognized by humans and they used it not only for guarding or alert purposes. The German shepherd dog has roughly 200 million sensitive cells...
within the nose until the average human being has only five million cells. Further there is a special smell organ in the dog’s mouth which is not present (or not scientifically proved) in humans. With this organ the canines tastes a smell and detects odours easily. Dogs able to detect which persisting in an area after the original scent source is not being in the area. The different odours in the air are powerfully clear to the dog; therefore it is able to distinguish between different scents. Scent trace a specific source and tracking by the dog [4].

Scent is made of many different compounds. Humans give off skin cells everywhere and this is the base of the scent identification method such as the tracking method. Human has more compounds than can be currently identified. Recent researches demonstrated and showed that the human scent is unique, and genetically determinated and influenced by a combination of factors like diet, environment and genetics alike. There are three basic parts of the compounds considering the above-mentioned statements: primary, secondary and tertiary scents. First means the genetically aspects which ensure the diversity, the uniqueness and stable over time. Secondary scents influenced by the type of diet, such as vegetarian and by environmental influences. At last tertiary odour compounds source from the external factors such as for example perfumes, lotions and soaps. Identical twins were distinguished from each other by the dog, but it is not an easy task based on the genetically influenced [5].

II.1. Collecting and preserving methods of human scent

Based on the points (1-8, 15-18) of special intern regulation, the searching method of the perpetrator’s scent at the crime scene is not definitely. The directive is simple: collecting the scents from the crime scene where they could find for a huge quantity. Solving the task, criminal technicians or dog handlers have to use the method of theoretical reconstruction.
To avoid the contamination, the human scent collecting is the first step at the crime scene’s dynamic phase if other requirements do not impose other solutions (such as preserving lives).

Theoretical reconstruction is a process when the technicians need to think out the commission method of crime. They have to know the perpetrator’s path, how did he get in the crime scene, which objects were touched by him etc. Answering the main questions (what, where, when, how, who, whom and why), using clues and evidence (such as fingerprint, result of DNA testing, eyewitness testimonies etc.) the crime is solved, the perpetrator(s) was identified. The global method could describe with a pyramid model [6, pp. 14-26].

Theoretical reconstruction is a part of the answering and beginning of the inspection. Thinking out the question in a logical way, for example what happened at the crime scene helps to locate the perpetrator’s body scent [7, pp. 8-14]. For example at the store robbery crime scene this place will be the surface in front of the counter. (Perpetrator was standing here for a long time supposedly.)

Criminal technicians have to wear rubber gloves to avoid the contamination of the perpetrator’s scent. They use cotton textile for the collecting procedure (remain on the surface) and they cover it with aluminium foil at least for half an hour. After about 30 minutes the cotton was put into the prepared sterile glass jar. The glass containers stored in a scent bank at the County Police Department. Storage time of glass jars (scent) is 3 years in general case therefore in case of crime against life by unknown perpetrators it is 10 years.

II.2. Recording of sample scent

During the investigation, if the law enforcement has a potential suspect in the crime case they also have to collect his scent. Before the collecting procedure, the person in question has to wash his hands with warm water without using soap.
or other chemicals. He has to wipe his hand with a cotton textile that is not usable for collecting odour. For 10 minutes he has to hold his hands (right and left) 2-2 cotton textile during the collecting method. The textile also put into the labelled glass containers. There are 3 spacer conditions when the technicians do not collect the sample scent. 1) after the imprisonment, 2) under the influence of alcohol 3) during the menstruation. Witnesses and victims are also required to give sample scents for the criminal procedure. The scent was collected with a concealed method in those cases where witnesses and victims refused the cooperation with the proceeding. It means that the law enforcement levy the clothes which contain scents of the suspect, witness and victim. The glass jars are also stored in the scent bank. Sample scents and scent traces were stored separately according to years and sending organs.

II.3. The scent identification line-up

It is a special human identification method with the scent identification dog. The object of the identification is the unique human scent what was collected the above-mentioned ways. There are 4 decoys (sample scent from non person in question) and suspects’ sample scents in the row. The starting scent in this case will be the scent trace pattern from the crime scene. The Directive also allows the reverse method when the starting scent is the suspect’s scent and the 4 decoys are object’s scent which were not correlate with the crime scene. In practice the collecting scents from similar surface at similar time is easier than collecting 4 sample scents from people. The requirement of similarity must show up (similar time-frame, same sex and race etc.). The scent identification area is at room temperature, 8-10 metres of length and has good ventilating property. The 4 decoys and suspects’ scent are 80-90 centimetres apart from each other. Before the real trial the control trial (zero trial) what was performed. These controls filter
out the possible attractiveness of suspect’s scent and the unfit condition of the
scent identification dog to working. In case of the negative matches when the
scent identification dog does not sign identity between the suspects’ sample scent
and scent trace pattern, the procedure will be finished. With positive matches the
process repeats for 5 times. Apart from dog handler one helper maybe attending
the scent identification line-up. Observation room shall ensure the rights of
attendance.

III. Summary

In Hungary, the positive result of scent identification line-up is not enough
for the establishment of the guilty of the suspect. The negative match does not
also led to the termination of the procedure against the perpetrator. The forensic
and legal availability of human scent identification line-up depends on a number
of circumstances. Human error types are avertable with harking. On the other
hand, there are some error possibilities based on the dog, like exhausting, burn-
out and other medical problems which can also be filtered out by the dog handler
or the veterinarian. Every year an aptitude test must be taken by the dogs, which
 guaranty the animals’ general ability of the identification method.

Considering the questionable points (the accurate composition and stability
of human scent, the error-rate must also be known) of scent identification line-up,
the result is preferably during the investigation to confirm or exclude the versions.
The results of the identification method with evaluating the other evidence using
before the Court. During the detection, bearing in mind the possible causes of
results it would be a good law enforcement tool. Therefore, the scent identification
line-up is one of the other procedures, evidence. Thanks to the free evaluation of
evidence (unlike the American judicature where Daubert criteria are known)
based on the Act XIX of 1998 on Criminal Proceedings, the result of scent
identification line-up is available during the investigation and before the Court alike.

**Bibliography**


Данія, Нідерланди, Франція та Угорщина. Це метод з використанням спеціально навчених собак (собак, що здійснюють ідентифікацію за запахом) і результат цієї процедури приймається як частина доказів, що подаються до суду. Ця стаття описує угорський досвід використання методу ідентифікації за запахом у судовій практиці.

Ключові слова: угорський метод, доказ за запахом, людський запах, кримінальний процес.

Horváth O.

Венгерский метод идентификации по запаху

Идентификация по запаху — это процедура, которая используется в практике многих европейских стран, таких как Чехия, Польша, Болгария, Дания, Нидерланды, Франция и Венгрия. Это метод с использованием специально обученных собак (собак, осуществляющих идентификацию по запаху) и результат этой процедуры принимается как часть доказательств, которые подаются в суд. Эта статья описывает венгерский опыт использования метода идентификации по запаху в судебной практике.

Ключевые слова: венгерский метод, доказательство по запаху, человеческий запах, уголовный процесс.

Horváth O.

The Hungarian method of scent identification line-up

Scent identification line-up is a procedure that used by numerous European countries like Czech Republic, Poland, Bulgaria, Denmark, Netherlands, France and Hungary. It is a method with special trained dogs (scent identification dog) and the result of this procedure is accepted as part of the evidence presented in
This paper describes the Hungarian forensic and legal utilization of scent identification method.

**Key words:** Hungarian method, scent evidence, human scent, Criminal Procedure.