Requirements for POCTs

What’s needed?
Visual Point of Contact Drug Test should be:
- easy to use
- safe to operate
- convenient
- reliable
- mobile
- hygienic
- validated
- legally approved

Customer requirements and specifications as basis for product development.
Dräger DrugCheck® 3000
Exemplary THC Concentration in OF over time

Tetrahydrocannabinol, THC

6 – 20 hours
days

Risk of current influence
Consumption detection

Drugs and their metabolites:
- Tetrahydrocannabinol (THC)
- Tetrahydrocannabinol hydroxide (THC-OH)
- Tetrahydrocannabinol carboxylic acid (THC-COOH)

Drug Metabolites
Risk of current influence
Consumption detection

Drug Detection: Emerging Technology | EWDT, Lisbon | Patrick Kresse | 28/05/2015
Oral fluid (OF) is an increasingly popular alternative matrix for drug testing, with cannabinoids being the most commonly identified illicit drug. 

*Drug Testing and Analysis / 2014*

Also, OF concentrations more closely correlate with blood than urine concentrations, making it an attractive matrix for estimates of impairment and time since prior drug administration.


The primary psychoactive component, Δ9-tetrahydrocannabinol (THC), contaminates the oral mucosa during smoking. OF THC concentrations are initially high after smoking, but quickly drop within 1–3 h.


OF collection is less invasive, does not require same sex collectors, and minimizes sample adulteration, dilution, and substitution compared to urine.

Dräger DrugCheck® 3000
Application Scenarios
Dräger DrugCheck® 3000
Application Scenarios

Some Facts
The Bottom Line

1. About 10% of the population (aged 12 and older) in industrial countries are frequent drug users.

2. Up to 75% of frequent drug users are either full time or part time employed.

3. Drugs cause 25-35% of all industrial injuries and fatalities.

4. Companies register drop of up to 55% positive rates after implementing drug testing programs within the first years.

In the European Union substance abuse at the workplace results in several hundred billion euros of economical damage every year.
Dräger DrugCheck® 3000
Application Scenarios

Challenge:
**Reliable and fast detection of drug abuse for more safety**

The consumption of illegal drugs at the workplace can have far reaching and lasting consequences. If an employee operates a plant whilst under the influence of drugs, accidents and damage to other persons and machinery might be the result.

Especially for remote operations, explosion protection regulated workplaces or workplaces with lack of infrastructure the possible safety risks multiply when drugs are added.

1. **Workplace**
2. **Law enforcement**

**Solution:** DrugCheck® 3000
Dräger DrugCheck® 3000
Application Scenarios
Dräger DrugCheck® 3000
Application Scenarios

Some Facts
The Bottom Line

1. About 30,000 road fatalities per year within the EU and further 1.7 Mio injured.
2. Surveys in 13 EU countries revealed 1.9% drug presence within motorists.
3. Most frequently abused substance within motorists is (Cannabis) THC.
4. It was found that 2 ng/ml THC in whole blood (3.8 ng/ml THC in serum) seems to cause impairment equivalent to 0.5 g/l BAC.

On European roads substance abuse and thus driving under the influence causes more than 7,500 fatalities a year.
Challenge: Reliable and fast detection of drug abuse for more safety

Law enforcement officers are faced with a large variety of situations where drugs are used, e.g. DUI (driving under the influence), domestic violence, theft, etc. Driving whilst under the influence of alcohol or drugs are amongst the most frequent causes of accidents. Effective controls provide with a firm tool to remove a drug abuser. The need for fast and easy to use equipment is evident in such situations.

1 Workplace
2 Law enforcement

Solution: DrugCheck® 3000
Dräger DrugCheck® 3000

Simple.
Safe.
Sound.

Dräger DruckCheck® 3000
The rapid drug test.
Dräger DrugCheck® 3000
Features & Benefits

Intuitive handling and convenient short instruction

Process and handling control due to color indication ring

Optimised to detect THC with two measurement options: fast or sensitive

Reliable sampling process due to color changing indicator ring

Result window with clearly visible control and test lines

Easy, hygienic sampling due to detachable sample collector
Hygienic and painless:
tamper-proof collection without blood samples

Sampling and analysis in one system,
ready-for-use on the spot

Dräger DrugCheck® 3000
Deep Dive

Fast detection of variety of substances
Check individuals for five substance classes simultaneously:
cocaine, opiates, amphetamine, methamphetamine, and
cannabis (THC)

The Dräger DrugCheck 3000 was optimized to detect THC,
and offers two measurement options: fast or sensitive.

<table>
<thead>
<tr>
<th>Fast</th>
<th>&gt; 40 ng/ml</th>
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<tbody>
<tr>
<td>Sensitive</td>
<td>&gt; 15 ng/ml</td>
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Unambiguous on-the-spot drug detection
Its compact design makes the DrugCheck 3000 easy to
transport and is ready for use quickly and easily, and is suitable
for roadside checks and testing in safety-relevant workplaces.

The test kit has no electrical parts, which makes it safe to use
in hazardous areas.

Minimizing hygienic risks and cross contamination; the test is
carried out in a few fast and hygienic steps.
The DrugCheck 3000 **complies with the in-vitro-diagnostic directive** relevant for European Union and states with contractual agreement with the European Economic Area.

The DrugCheck 3000 is used as a point of contact screening device only.

In all other markets for law enforcement, criminal justice, rehabilitation *outside the EU*, the DrugCheck 3000 can be used as a Non-IVD product worldwide*.

*The DrugCheck 3000 is sold only for law enforcement purposes in the USA; for forensic use only.*

The DrugCheck 3000 conforms to the **98/79/EC directive** and **ISO 13485** requirements.

The DrugCheck 3000 is **under independent continuous clinical evaluation**.

- 70 countries where our drug testing solutions are sold
- 5 substance classes simultaneously

*The DrugCheck 3000 is sold only for law enforcement purposes in the USA; for forensic use only.*
**Dräger DrugCheck® 3000**

**Why Dräger?**

<table>
<thead>
<tr>
<th>01</th>
<th>Excellent expertise</th>
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<tr>
<td>&gt; You benefit from a great variety of products and our training expertise</td>
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<td>&gt; Our products are easy to use and adapted to different working conditions</td>
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<th>02</th>
<th>Highest technological quality</th>
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<td>&gt; Dräger is a world leader in the fields of breath alcohol testing and oral fluid drug screening, with thousands of agencies using Dräger equipment across the globe</td>
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<td>&gt; We guarantee up-to-date technology for reliable results</td>
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<th>03</th>
<th>Widespread safety know-how</th>
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<tr>
<td>&gt; Our alcohol and drug detection portfolio provides everything from the top-of-the-line evidential breath tests to the easy-to-use alcohol ignition interlock and drug detection technology on the market. Dräger is dedicated to improving safety.</td>
<td></td>
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<tr>
<th>60 years of experience in breath alcohol measurement</th>
<th>10 years of experience in drug detection technology</th>
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0,000 000 015 g of THC can be detected in 1ml of Saliva with the DrugCheck 3000
Thank you!

Patrick Kresse
Global Product Manager
Drug Testing Solutions & Forensic Applications

Dräger Safety AG & Co. KGaA
Revalstrasse 1
23560 Lübeck
Back-Up
## Dräger DrugCheck® 3000

### Technical Data

| Temperature range | Operation temperature: 0°C to 30°C  
|                  | Storage temperature: 4°C to 25°C |
| Short time to result | < 7 minutes at 15 ng/ml THC  
|                    | < 5 minutes at 40 ng/ml THC |
| Proven Dräger technology | Experiences from over 10 years in drug detection and continuous improvement |
| Low THC Cut-Off level (adjustable) | Low detection limit for THC (15 / 40 ng/ml) |
| Pocket size of the test kit | The test kit weights is less than 20 grams; 2 component system. |
| Variety of tested substances | Cocaine (20 ng/ml)  
|                               | Opiates (20 ng/ml)  
|                               | Amphetamines (50 ng/ml)  
|                               | Methamphetamines (50 ng/ml)  
|                               | Cannabis (15/40 ng/ml) |
| Mobile Use | The DrugCheck 3000 can be used independent of infrastructure in many scenarios. |
Cannabinoid disposition in oral fluid after controlled cannabis smoking in frequent and occasional smokers; Matthew N. Newmeyer,a,b Nathalie A. Desrosiers,a,b Dayong Lee,a,b,c Damodara R. Mendu,a,d Allan J. Barnes,a David A. Gorelicka,e and Marilyn A. Huestis; Drug Test. Analysis (2014); Published 8 February 2014; Published online in Wiley Online Library
THC Concentration in OF over time
2D-GC/MS Analysis

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Hands-on
Dräger DrugCheck® 3000
Functionality: 6 simple steps toward success

Intuitive test conduction: COLLECTION & EXTRACTION
Dräger DrugCheck® 3000
Functionality: 6 simple steps toward success

Intuitive test conduction: COLLECTION & EXTRACTION
Intuitive test conduction: WAITING & STARTING
Dräger DrugCheck® 3000
Functionality: 6 simple steps toward success

Intuitive test conduction: RESULT EVALUATION

Test is valid and negative

Test is valid and positive for opiates

Test is invalid