





# PILOT STUDY ON A METHODOLOGY FOR TESTING CAR DRIVERS FOR DRUG USE A ROADSIDE STUDY IN PORTUGAL, 2025

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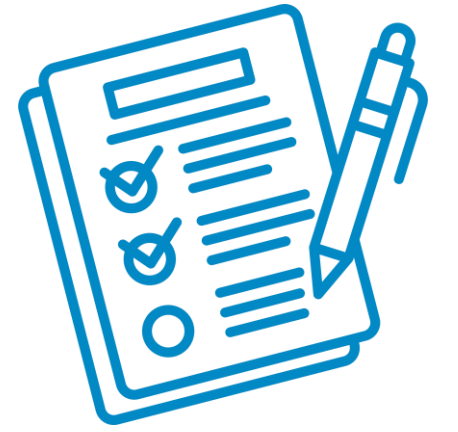
PORTUGUESE ROAD SAFETY ASSOCIATION (PRP)  
[www.prp.pt](http://www.prp.pt)

April 28th,  
2026

Regulating Drug Driving to Protect All Road Users  
Mapfre Foundation Auditorium , Madrid



# Background



- Drug use and driving are strictly regulated in Portugal;
- Unlike alcohol, random roadside drug testing is not permitted;
- Police saliva testing is only allowed where there is reasonable suspicion based on observed signs of impairment;
- As a result, information on the general prevalence of drug use among drivers remains limited;
- Additional challenges include the cost of roadside drug screening tests, different cut-off drug screening tests and the difficulty of defining thresholds that reliably reflect driving impairment;
- **This pilot study tested a voluntary, anonymous roadside drug-screening approach without police involvement.**



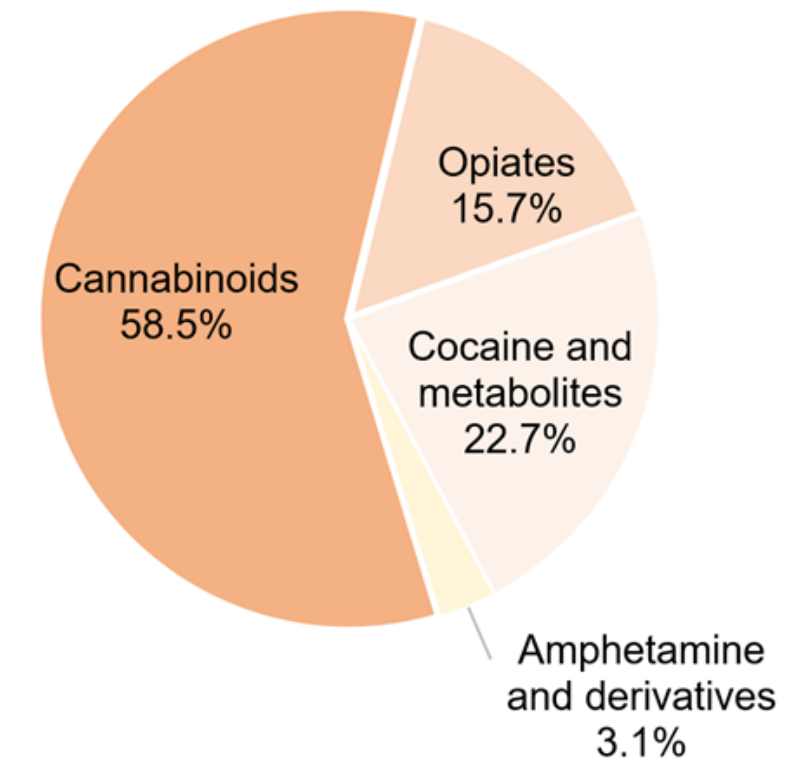
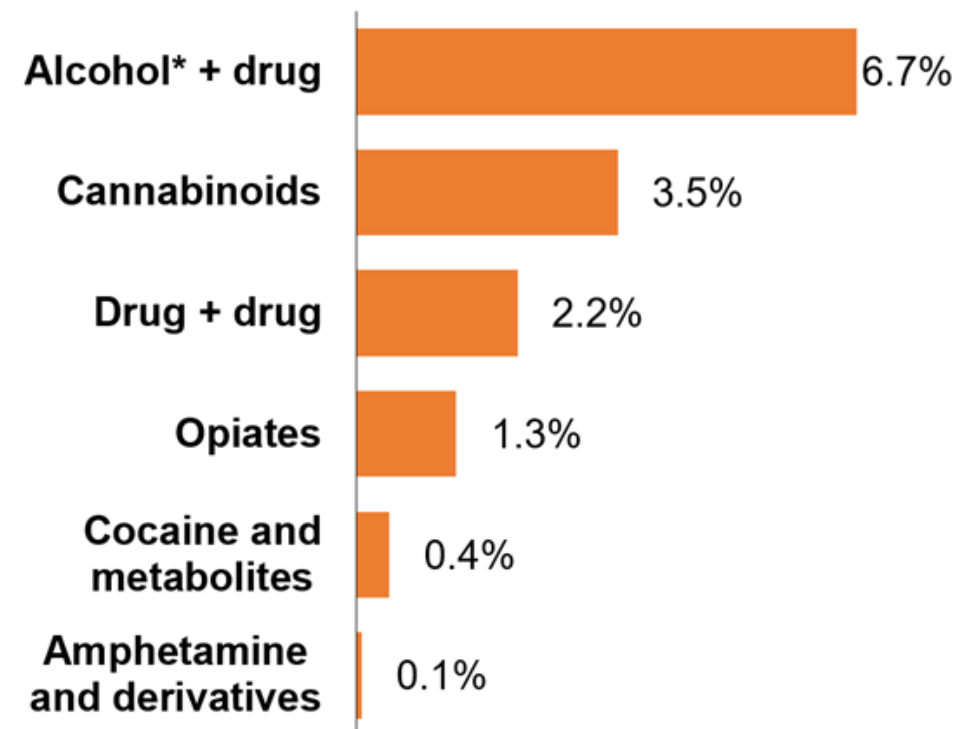
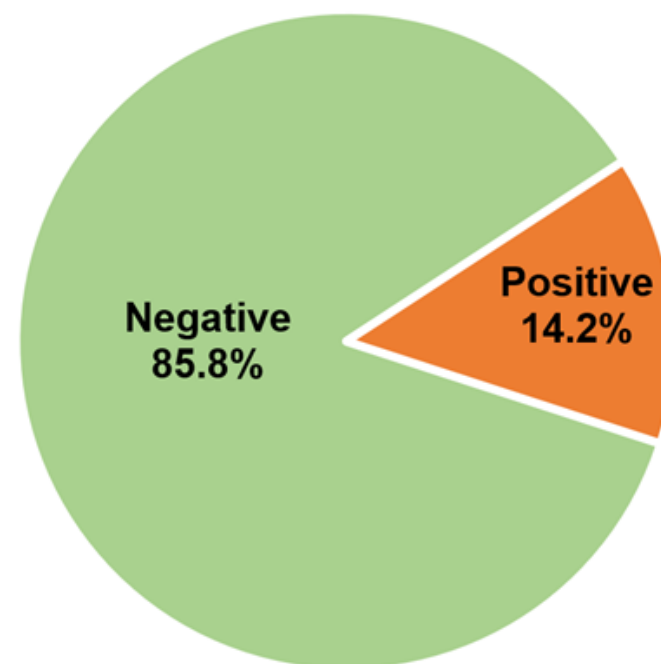
# Road fatalities involving drugs in Portugal

Drug driving in Portugal: national overview



Driver fatalities with positive toxicology results, by substance type

Portugal, 2020–2024



Source: forensic autopsy data from the National Institute of Legal Medicine and Forensic Sciences.

Left chart: percentage of fatally injured drivers testing negative or positive for any substance; centre chart: proportion of all driver fatalities by substance category; right chart: distribution of positive cases by substance group.

\* Alcohol-positive cases with BAC  $\geq$  0.10 g/L

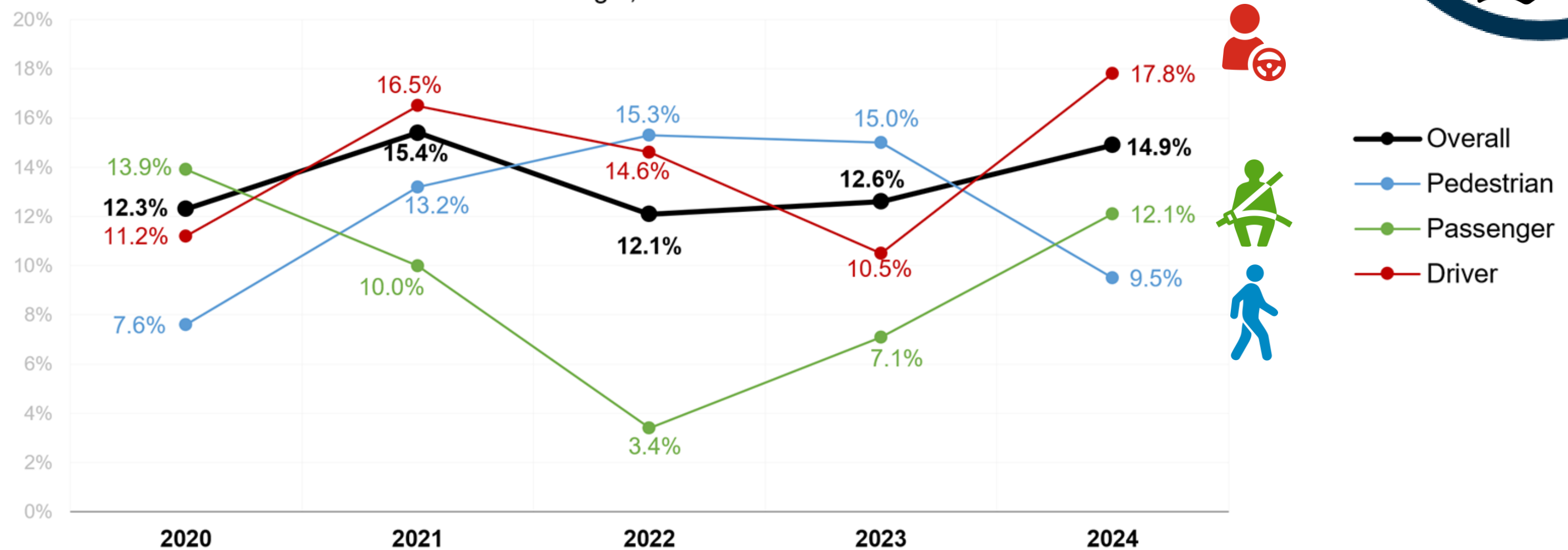


# Road fatalities involving drugs in Portugal

Drug driving in Portugal: national overview



Road traffic fatalities with positive toxicology results, by road user type  
Portugal, 2020–2024



Percentage of road traffic fatalities with positive toxicology results, by road user type, Portugal, 2020–2024.  
Source: forensic autopsy data from the National Institute of Legal Medicine and Forensic Sciences.



## Drug driving in Portugal: national overview

ESRA3 (2023)



## Self-declared behaviour & Personal acceptability

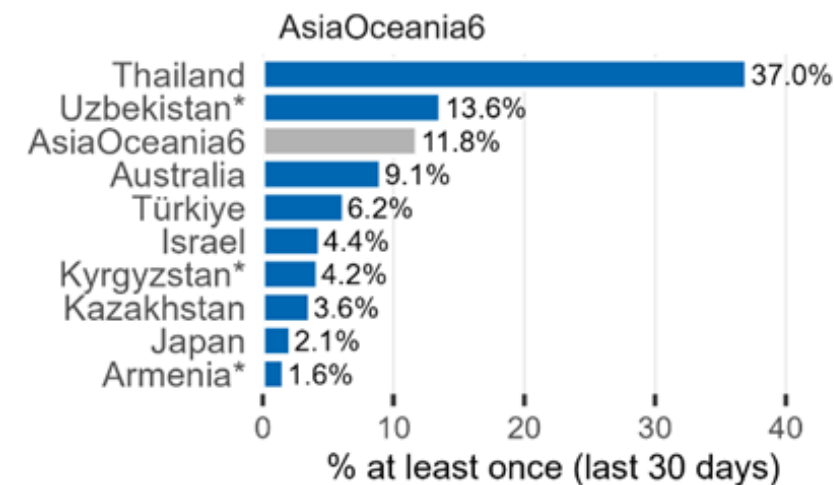
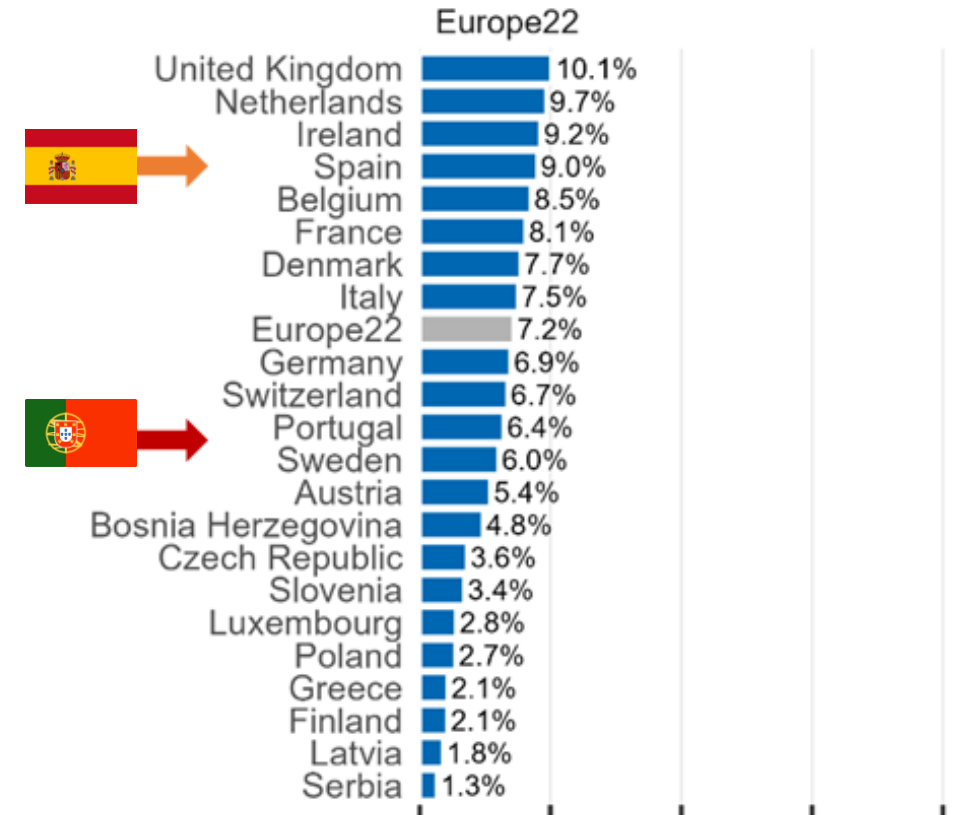
### Car drivers

Drive within 1 hour after taking drugs (other than prescribed or over the counter medication).



### SELF-DECLARED BEHAVIOUR AS A CAR DRIVER

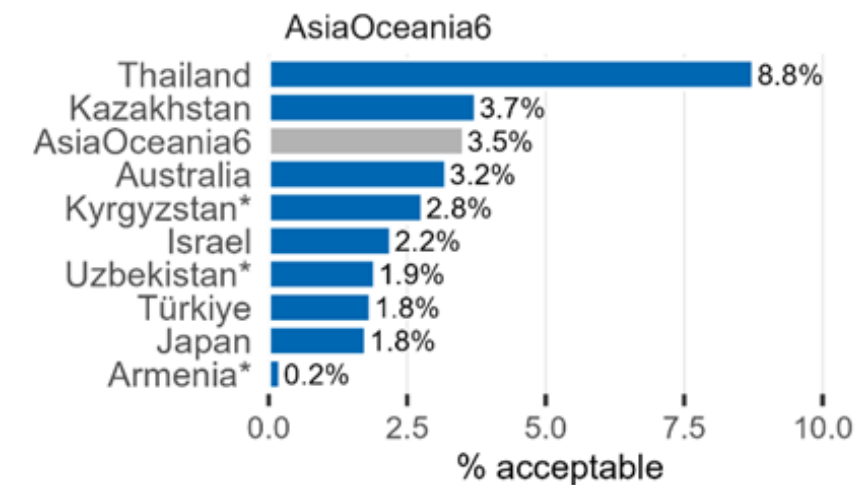
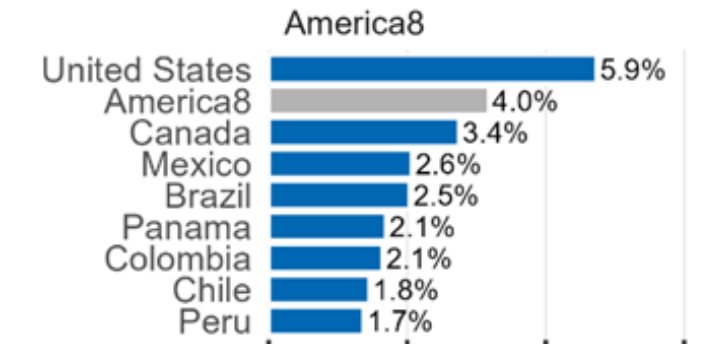
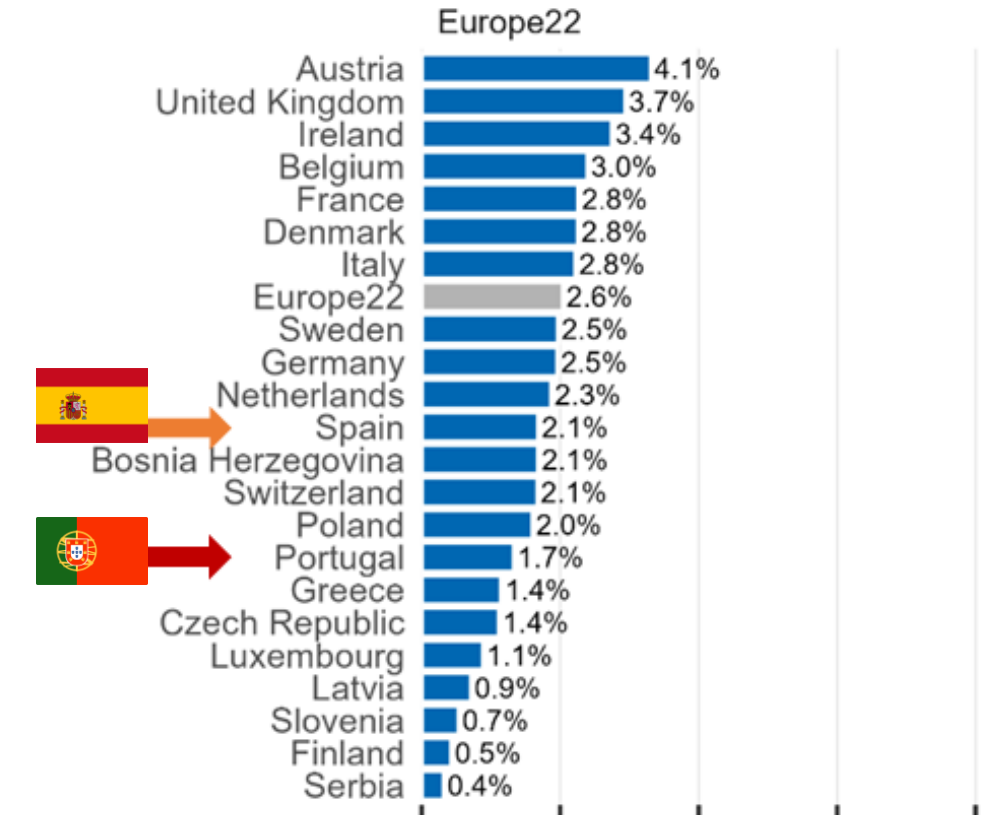
Drive within 1 hour after taking drugs (other than prescribed or over the counter medication)



Reference population: car drivers at least a few days a month, \*not in regional mean (different methodology)

### PERSONAL ACCEPTABILITY - CAR DRIVER

Drive within 1 hour after taking drugs (other than prescribed or over the counter medication)



Reference population: all road users, \*not in regional mean (different methodology)



## Drug driving in Portugal: national overview

ESRA3 (2023)



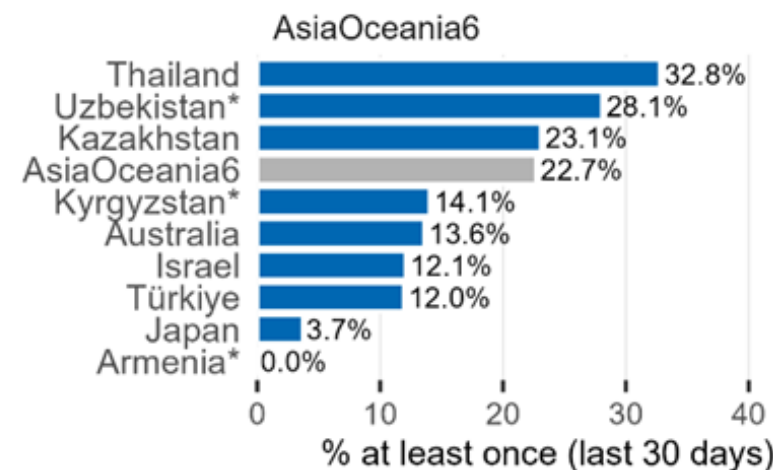
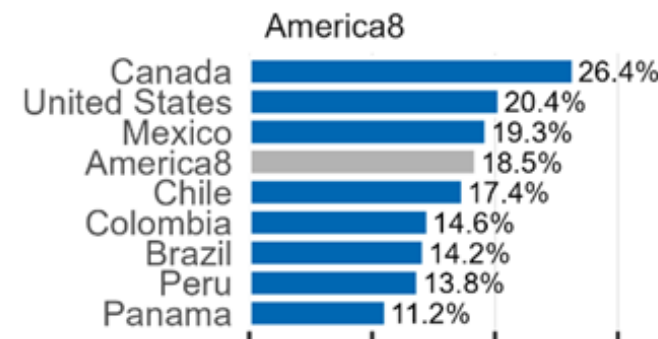
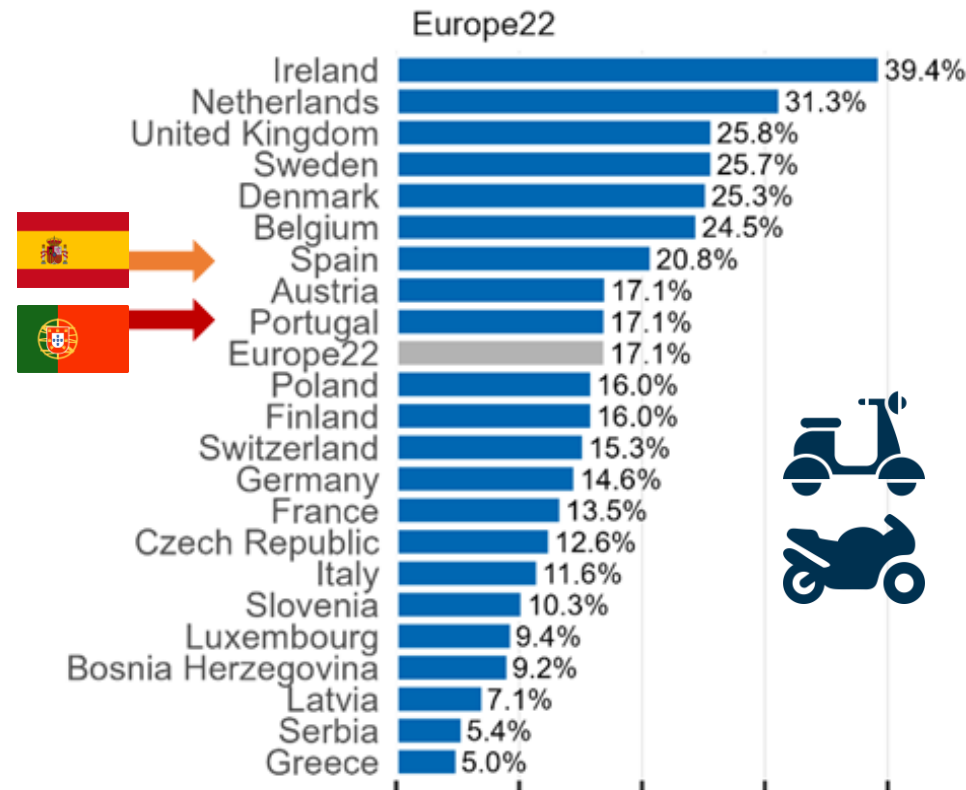
## Self-declared behaviour & Personal acceptability

**Motorcyclist/ moped riders** **Cyclists**  
*Ride/cycle within 1 hour after taking drugs (other than prescribed or over the counter medication).*



### SELF-DECLARED BEHAVIOUR AS A MOTORCYCLIST OR MOPED RIDER

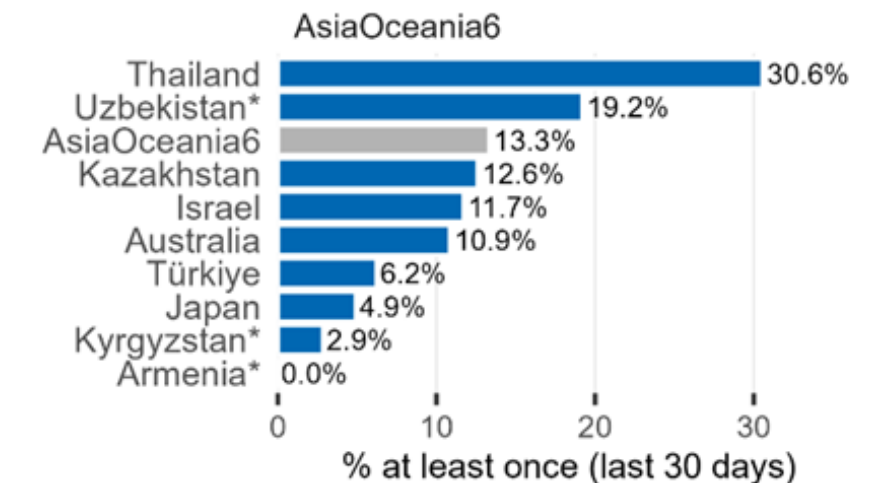
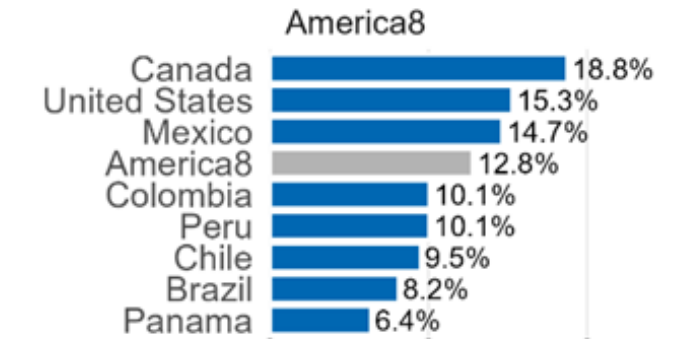
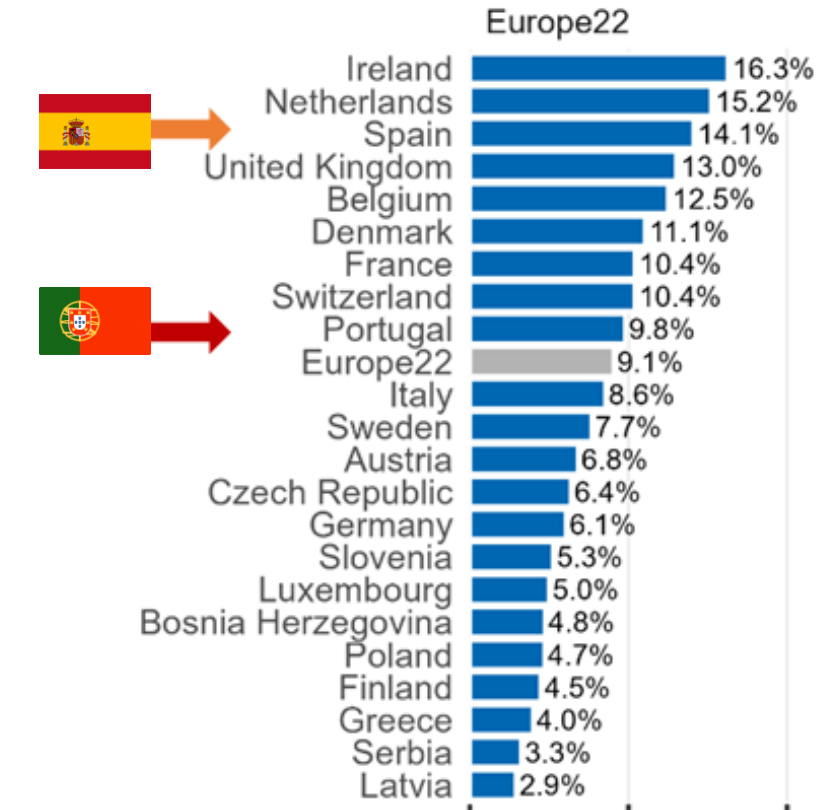
Ride within 1 hour after taking drugs (other than prescribed or over the counter medication)



Reference population: motorcyclists and moped riders at least a few days a month, \*not in regional mean (different methodology)

### SELF-DECLARED BEHAVIOUR AS A CYCLIST

Cycle within 1 hour after taking drugs (other than prescribed or over the counter medication)



Reference population: cyclists at least a few days a month, \*not in regional mean (different methodology)



## Drug driving in Portugal: national overview

ESRA3 (2023)



## Enforcement perception & Experienced enforcement

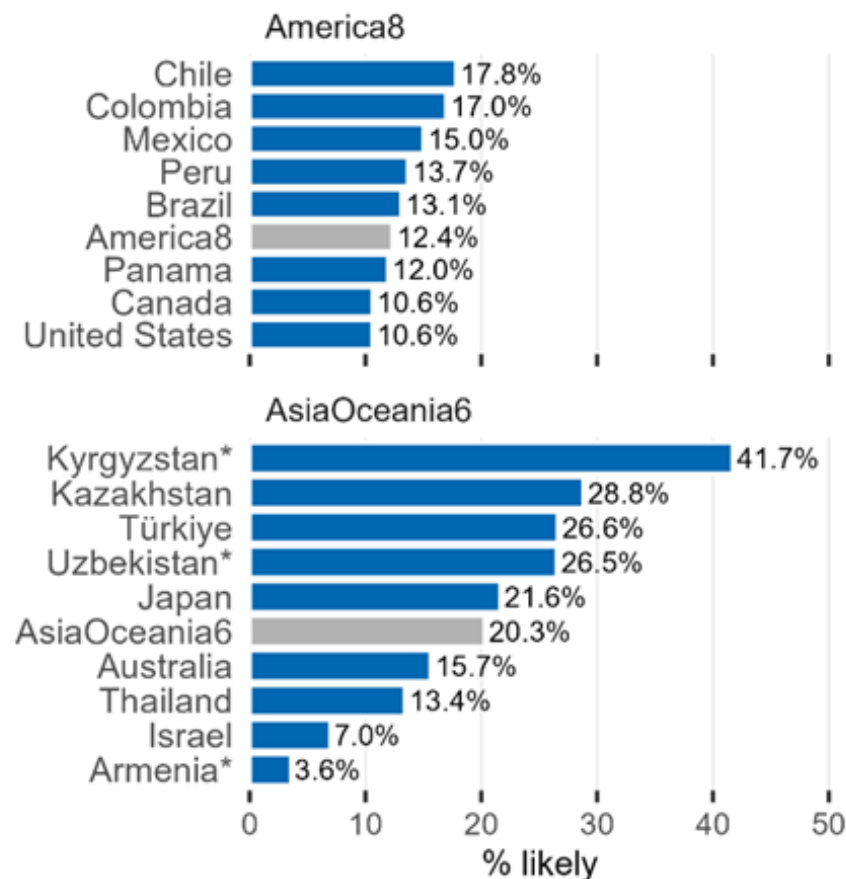
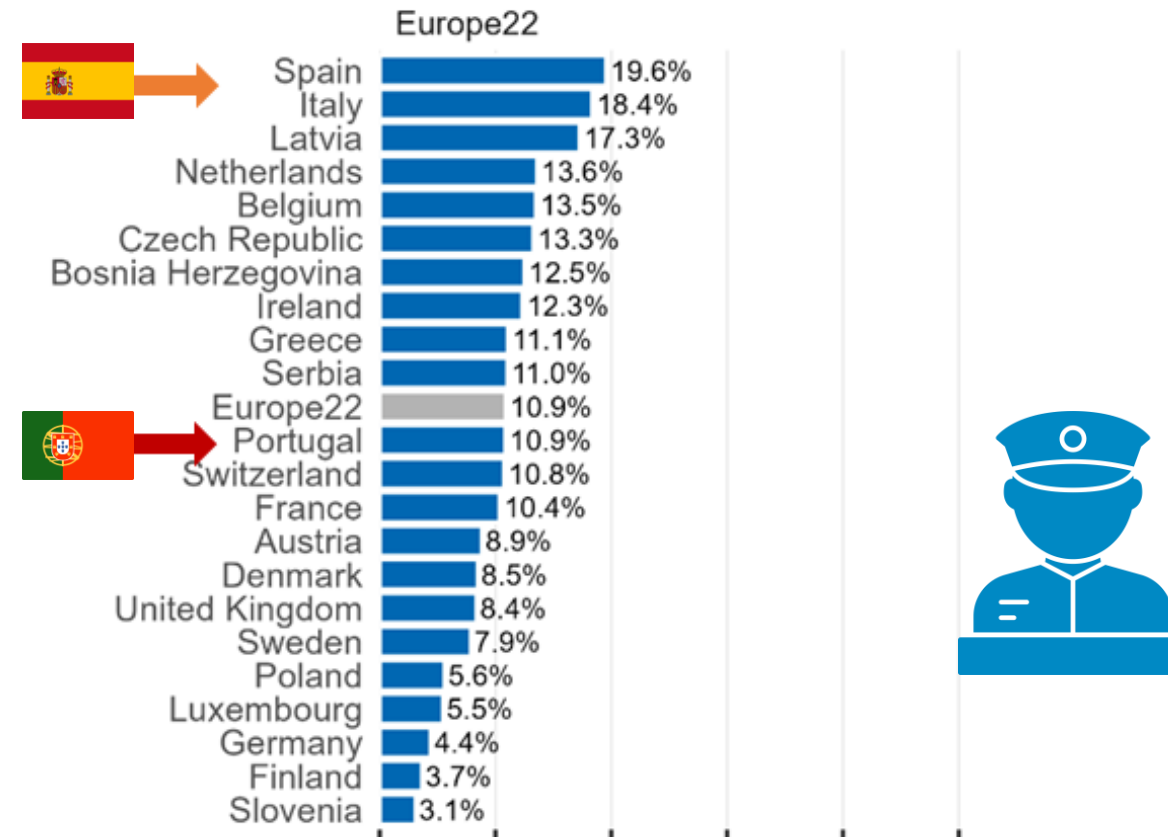
### Car drivers

Checked by the police for using drugs (other than prescribed or over the counter medication) while driving a car.



### ENFORCEMENT PERCEPTION

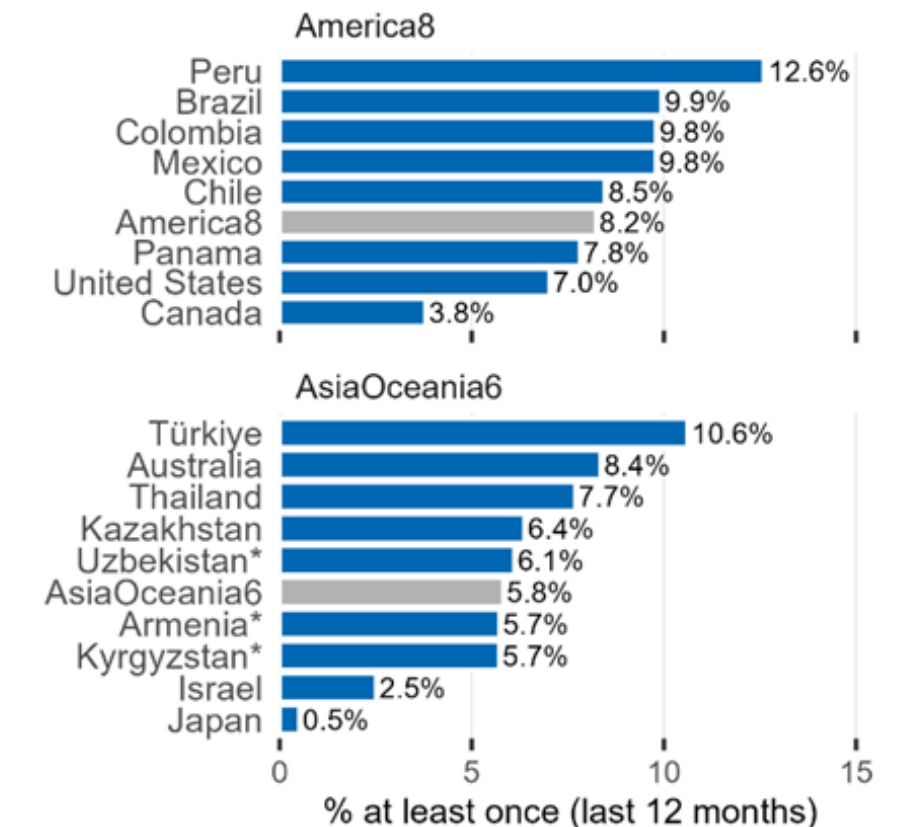
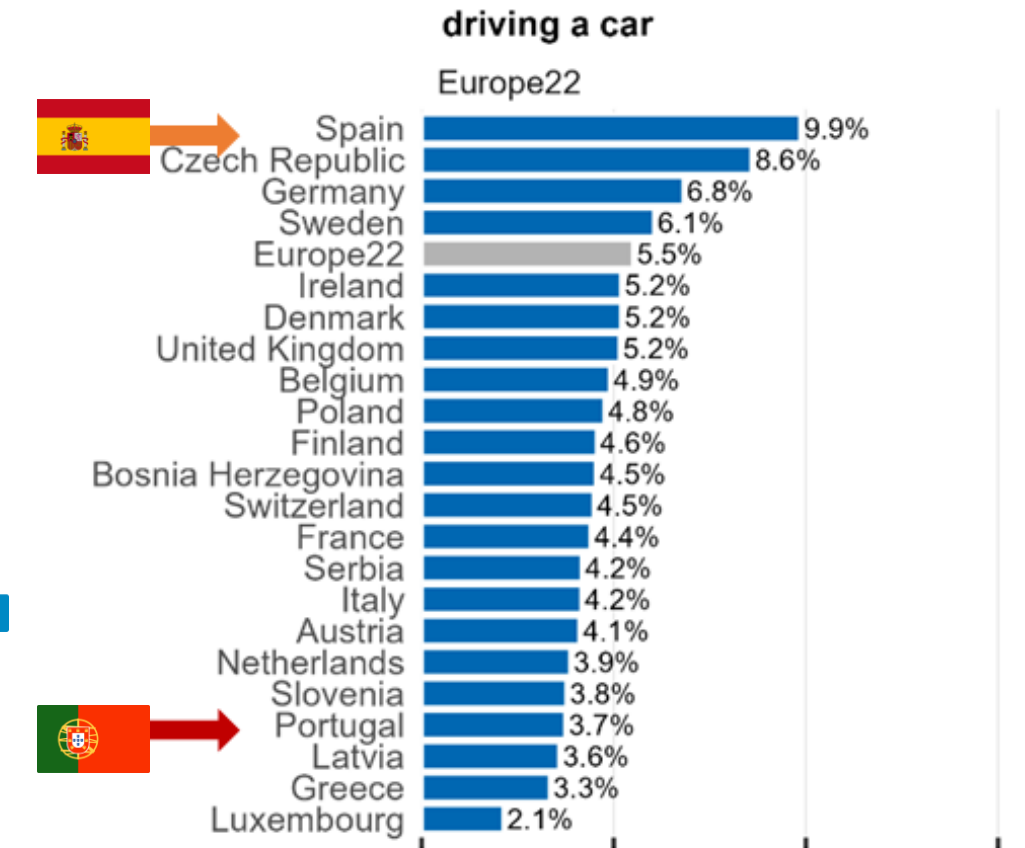
Checked by the police for the use of illegal drugs



Reference population: car drivers at least a few days a year, \*not in regional mean (different methodology)

### EXPERIENCED ENFORCEMENT

Checked by the police for using drugs (other than prescribed or over the counter medication) while driving a car



Reference population: car drivers at least a few days a year, \*not in regional mean (different methodology)



# *Objectives and study design*



## Objectives:

- Test the feasibility of voluntary roadside saliva drug screening without police involvement;
- Assess how well self-declared questions capture drug use while driving;
- Examine drivers' attitudes towards drug testing.

## Study design:

- Pilot roadside study in petrol stations;
- Voluntary, anonymous participation by car drivers;
- Combined approach: saliva drug test + short questionnaire;
- Conducted without police involvement;
- Questionnaires completed on paper or tablet.

**Trendline**

This study was carried out as part of the **Trendline** project



# Questionnaire



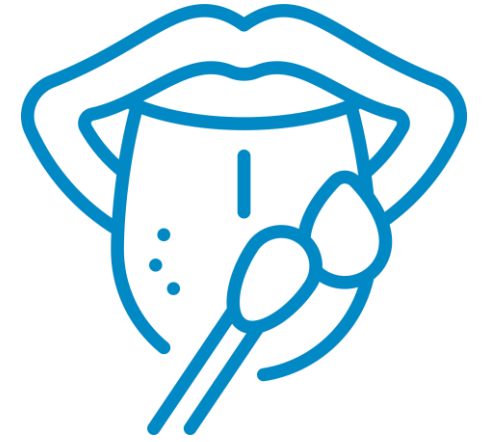
- Short anonymous questionnaire completed before saliva testing.
- Included:
  - driver and trip information.
  - **self-declared driving after drug use** in the past 30 days.
    - \* Over the last 30 days, how often did you as a car driver, drive within 1 hour after taking drugs (other than prescribed or over the counter medication)?
  - **self-declared driving after medication** use in the past 30 days.
    - \* Over the last 30 days, how often did you as a car driver, drive within 2 hours after taking medication that may affect your driving ability?

*\* questions aligned with ESRA3*

*Answer scale: 5-point scale 1 to 5, where 1 is "never" and 5 is "(almost) always".*



# Saliva drug testing



Two portable saliva drug screening devices were used in the pilot study. Both are currently used by the Portuguese authorities.

Devices used for saliva testing, substances tested, times, and thresholds.

Substances tested	Dräger® DrugCheck 3000 STK 5	SECURETEC® DrugWipe 5S
	Thresholds to be positive (ng/mL)	
Cannabis (THC)	25	5
Cocaine	20	10
Opiates	20	10
Amphetamines	50	80*
Methamphetamines	50	
<b>Times after collecting the saliva</b>		
Time to have results	5 minutes	3 minutes
Maximum time to evaluate	10 minutes	10 minutes

\* SECURETEC® DrugWipe 5S has a combined amphetamine/methamphetamine panel.



# Sample and locations



- **Target population:** car drivers.
- Sample designed to reflect the Portuguese car-driver population in terms of sex and age group (18–24, 25–44, 45–64, 65+).
- Data were collected in four Portuguese cities in May 2025.
- Two trained researchers were involved in each session.

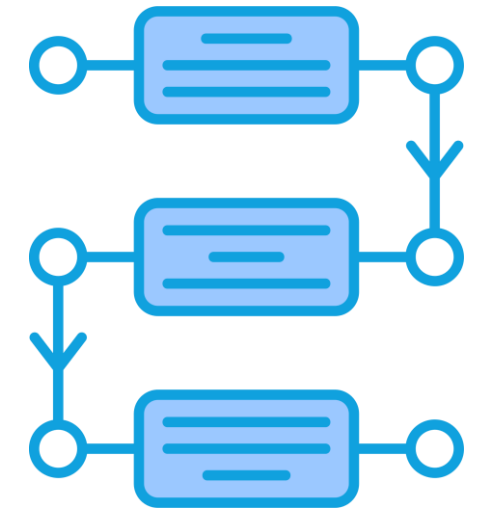
## Sample size by location and day of the week:

Location	Weekday	Weekend day	Total
Motorways	n = 25 (1 session)	-	n = 25
Inside built-up areas	n = 60 (3 sessions)	n = 24 (1 session)	n = 84
<b>Total</b>	n = 85	n = 34	<b>N = 109</b>

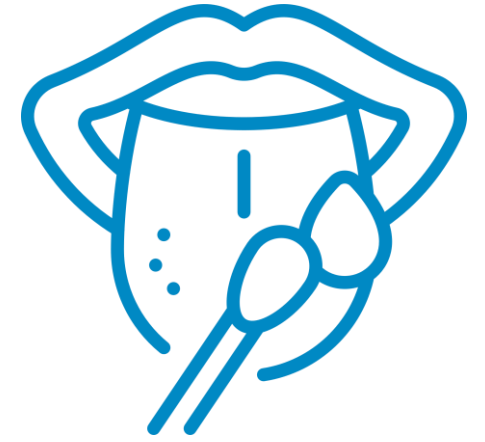


# *Field procedures*

- Drivers were approached at **petrol stations** and invited to **participate voluntarily**.
- Random selection following a **next-driver approach**, with quotas by sex and age group.
- Participants completed a **self-administered questionnaire** on paper or tablet (anonymization).
- A **saliva drug test** was then carried out using a disposable testing device.
- Results were checked after the required waiting time, once the driver had left the site, although some drivers chose to wait and see the result.
- Questionnaire and test were linked through a unique anonymous ID.
- Average duration: **approximately 5 minutes**.

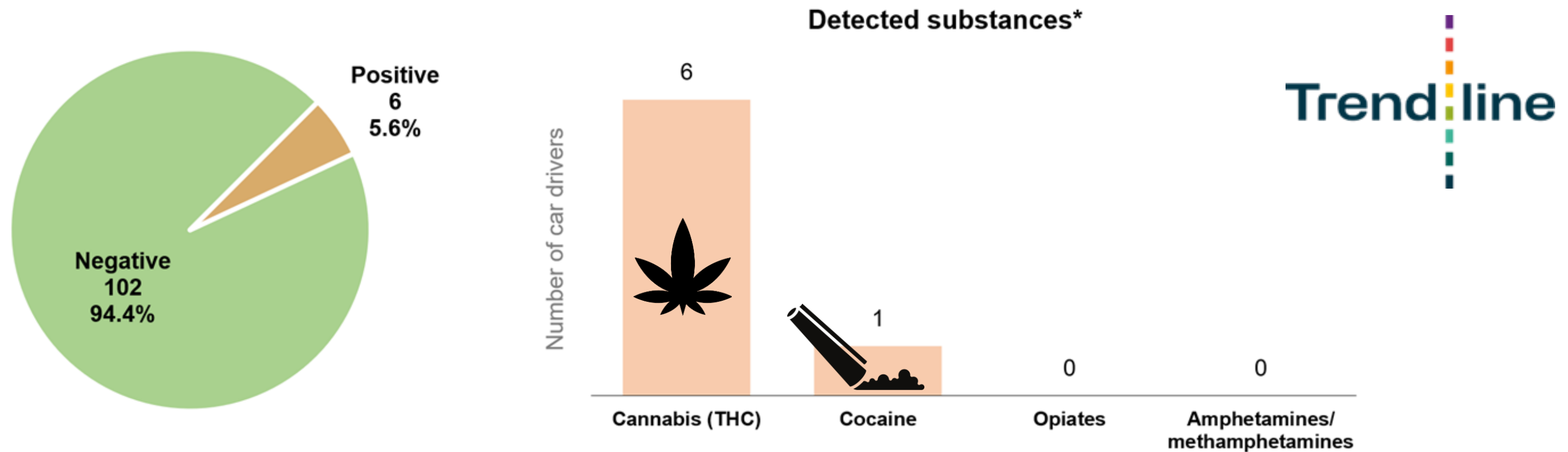


# Results - saliva drug testing



## Prevalence of drug-positive drivers among car drivers

Portugal, 2025



Sample: 108 valid tests from car drivers. One cannabis (THC) test was invalid. \* One driver tested positive for both cannabis and cocaine.



# Results - questionnaire



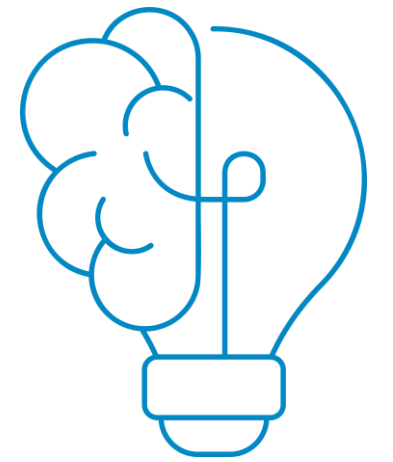
Self-declared behaviour – drugs and medication (N = 109).

	At least once*	ESRA3 Portugal*
<b>Over the last 30 days, how often did you as a car driver, drive within 1 hour after taking drugs (other than prescribed or over the counter medication)?</b>	<b>5 (4.6%)</b>	<b>6.4%</b>
<b>Substances</b>		
Cannabis (THC)	5 (4.6%)	2.0%
Cocaine	0 (0.0%)	0.3%
Opiates	0 (0.0%)	1.0%
Amphetamines/ Methamphetamines	0 (0.0%)	0.4%
Other	0 (0.0%)	3.5%
<b>Over the last 30 days, had driven within 2 hours after taking medication that may affect the driving ability</b>	<b>12 (11.0%)</b>	<b>11.6%</b>
<b>Medication</b>		
Antihistamines and/or cough medicines	6 (5.5%)	4.3%
Antidepressants	2 (1.8%)	2.0%
Prescription pain medicines	1 (0.9%)	2.3%
Muscle relaxants	0 (0.0%)	3.3%
Sleep aids, Barbiturates, or Benzodiazepines	0 (0.0%)	1.4%
Amphetamines	0 (0.0%)	0.8%
Other	3 (2.8%)	2.0%

\* Answers 2 to 5 in a 5-point scale 1 to 5, where 1 is “never” and 5 is “(almost) always”.



# *Main conclusions and limitations*



- Roadside **saliva drug testing was feasible** in Portugal without police involvement.
- **Voluntary participation was high**, suggesting good acceptability of this non-police approach.
- Fieldwork procedures were **compatible with roadside data collection** and could be implemented in a relatively short time.
- Voluntary participation may have introduced **selection bias**, so **prevalence estimates should be seen as minimum estimates**.
- **Positive drug results do not necessarily indicate current impairment**, as some drivers with positive result reported use more than 12 hours before testing.
- **Questionnaire** data may provide a **useful low-cost complement to saliva testing**, although medication-related responses may be affected by misclassification.
- **Test cost** should also be considered when assessing the feasibility of wider implementation.



# *Recommendations*



- Consider **voluntary roadside saliva testing** as a **feasible option** in contexts where police involvement is not permitted.
- Combine saliva testing with **self-reported data** to improve prevalence estimates and better understand related behaviours and attitudes.
- When scaling up this approach, take **test costs, possible underestimation**, and the relationship between positive results and actual impairment into account.
- **Further research** is needed to clarify how positive saliva results relate to actual impairment.



