



EMCDDA SCIENTIFIC REPORT

**ON-SITE PILL-TESTING  
INTERVENTIONS IN THE  
EUROPEAN UNION**

**Executive summary**

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## **INTRODUCTORY NOTE**

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The EMCDDA fulfils its mandate as an independent information agency by striving to provide objective, comparable and reliable information on the drugs phenomenon. All EMCDDA reports concerning responses to drug problems aim to describe with best possible accuracy the state of the art and the real nature of interventions, methodologies and strategies in Member States. EMCDDA-commissioned reports are therefore internally reviewed and revised according to the information available.

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# EXECUTIVE SUMMARY

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## BACKGROUND AND INTRODUCTION

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Concern in the European Union has increased during the past years about the content of pills sold as ecstasy, but which often contain other substances such as amphetamines or sometimes especially harmful ones such as 4-MTA or PMA. An example of European cooperation in this area is the Joint Action on new synthetic drugs, set up in 1997 with a view to serving as an early warning system among Member States to detect and assess the risks of new synthetic drugs. Such a system has been set up in order to evaluate the risks of a substance encountered on the market before deciding on control measures.

However, within this context, the challenge of taking the necessary prevention measures still remains – in particular to approach and inform hard-to-reach target groups such as ecstasy consumers about health risks, as these groups do not access the traditional drug care systems. The youth culture they identify with is, above all, characterised by its preference for electronic music and dancing. New esthetical values and codes, different communication patterns, a persistent commercialising of the whole culture, new synthetic drugs and changing drug-consumption patterns are further distinguishing marks of the rave scene. Dealing in an appropriate and adequate manner with all these developments, new substances, legal concerns and the phenomenon of *recreational drug use* presents a real challenge for policy-makers.

The main purpose of this study, carried out by Check-It in Vienna for the EMCDDA in 2000, was to provide an objective overview of goals, methods, results and evaluation efforts of pill-testing projects – both those that are up and running in the European Union and those in planning stage to be set up in the near future. A comprehensive questionnaire was elaborated and sent to all known organisations. Telephone interviews and e-mail exchanges were used to highlight individual problems or shortcomings of pill-testing interventions. In November 2000 a meeting of pill-testing project representatives was held in Vienna to discuss in more detail the legal situation, project goals, analytical procedures and regular information exchange.

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## GOALS OF PILL TESTING

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Broadly, pill testing aims to warn against very harmful and unexpected substances on site or via the internet and to provide an attractive way of contacting potential consumers of illicit substances to offer information and counselling. As a scientifically motivated approach, pill testing is an instrument – in addition to others in a comprehensive drug strategy – to obtain precise knowledge not only about the current black-market situation but for detecting, tracking and monitoring emerging consumption trends, local and international changing patterns of use, and a variety of demographic data on consumers of illicit substances and other people at risk. Information and warning systems (informal and formal) against new, unexpected or

very dangerous pills or about new consumption trends may benefit strongly from pill-testing projects. On the other hand, the information provided by warning systems can be used most meaningfully if there are projects that are in a position to tell their clients what they are specifically warning against.

**Harm reduction:** All pill-testing projects are set up to inform consumers about very dangerous and unexpected pills on site, through magazines, flyers, posters or through the internet. Apart from warnings issued about dangerous and unexpected pills, the dosage of substances in pills is an important issue. The warning messages about harmful substances or harmful compositions of pills – that are often heeded by consumers of ecstasy – are only meaningful if consumers are in a position to have their pills chemically analysed. A considerable number of consumers still consider ecstasy to be a relatively safe drug. On-site pill testing is one of the few existing methods to approach consumers and to directly transmit them “*safer-use*” messages that cover a variety of topics such as acute and short-term hazards to health (e.g. dehydration, overdoses), long-term hazards to health and addiction, legal risks and safer driving messages.

**Prevention:** Current pill-testing interventions in Europe offer more than just mere testing of pills. Most of the projects also offer *information talks* and *crisis intervention*. Pill testing is an instrument that attracts visitors – because it deals with substances, because there is at least some technical equipment there and because the exact content of pills is always of major concern to them. This situation can be used to provide visitors with information sheets or booklets and to involve them in extended information and counselling talks, with presumably preventive effects. “Information talks” mean conversations between the project staff and potential drug users that last longer than 5 minutes and deal with topics such as “*safer-use*” messages, information about substances or psychosocial problems. All projects offer information talks even if they do not have the chemical analysis equipment present on that particular day.

**Monitoring and research:** The fact that on-site pill testing is collecting data and qualitative insights about drug markets, demographic and psychological, medical and social issues concerning rave visitors and other consumers of illicit substances is an important prerequisite to setting up and improving information and prevention projects and to planning scientific studies on patterns of use and related dangers.

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## PROJECT ORGANISATION AND OPERATION MODES

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The study highlights that persons from different professional fields are involved in pill-testing projects – for example, social workers and psychologists are working together with chemists. The most important sources of funding are public: between 80 and 100% of most budgets come from local, regional or federal authorities. Content-wise, information is the key issue in pill testing interventions. It is assumed that even if knowledge does not necessarily prevent the use of drugs, it is certainly relevant to preventing them from being used in an especially risky way. So, for instance in 1999, all projects in the study listed at least 40 on-site talks with potential consumers per event with a maximum of 250 talks. In terms of target groups envisaged, pill-testing projects mostly try to reach consumers and potential consumers of psychoactive substances, i.e. the minimum criterion for belonging to a target group seems to be *not consuming, but interested in party drugs*.

Given that there are great differences between the pill-testing projects as regards the number of staff and analytical set-up, meaningful comparisons cannot be drawn between the number of on-site test operations, the number of persons reached or the number of pills analysed. However, in 1999, the number of on-site test operations ranges from 5 for ChEckiT (Vienna) and DROBS (Hannover) to 24 for Energy Control (Barcelona/Madrid). The number of pills tested per rave ranges from 7 (Pilot E, Bern) to 75 (Energy Control).

Preferred places for pill-testing interventions are either near the entrance or near the chill-out area (Chai-Shop, Space-Bar). In order to be effective, the work-site should be as close and visible to the audience, and as quiet as possible. The projects promote their pill-testing services with project flyers, rave or event flyers, posters, signposts or by setting up desks that are used for the distribution of information.

Among the pill-testing projects featured in the report, there are differences on the question of who should receive what level of information about quality and quantity of tested pills. Some projects such as Eve & Rave believe that everybody should have access to all information available, for example through the internet. Other organisations believe that everybody should have information on especially dangerous pills but not on all pills. All projects, however, pass the test results on at least to the person who presented the pill. Four categories of information policies can be distinguished: a) *Information only for the person who brought the pill*, b) *information for others only in the case of "especially dangerous" pills*, c) *some information for others in case of "expected" pills, all information in the case of "especially dangerous" pills* and d) *all information for everyone*.

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## LEGAL FRAMEWORK

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In order to chemically analyse ecstasy and other illicit substances, the substances have to be presented by potential consumers to the project team. Apart from in the Netherlands where pill testing is part of the official drug policy, drug checking is not integrated in official concepts or policies and there is a general uncertainty surrounding legislation in most Member States where on-site pill testing is carried out (Austria, Belgium, Germany, Spain and France). Projects have to rely on regional regulations, ad hoc legal opinions or special agreements. The purpose of scientific research is the main reason for official support or tolerance of on-site pill testing projects in Vienna and Belgium. Beyond this, the linking it with preventive messages is an important argument in France and Switzerland. Generally, a minimum of political backing and good co-operation with the local police force seems necessary to run pill-testing projects. In particular, there has to be an exchange of views or specific agreements with the police in order to avoid them intervening at on-site pill testing events – especially if the police (as is the case in most European countries) are actually forced by law to intervene in view of potentially illegal acts. Also co-operation with organisers, with health services and with local authorities is crucial for good performance of on-site pill-testing interventions.

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## ANALYTICAL PROCEDURES

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**Pill identification** methods rely on the comparison of pills brought by potential consumers with lists of formerly analysed pills. It is not a chemical analytical procedure. In general the pill to be tested is weighed, the diameter and width are measured, and these data, along with branding, score and colour are compared with listings of pills with known content and with data on quantity of content.

**Marquis test (colour reaction test)** in the form of pill-testing kits are relatively simple, inexpensive products. The kit can identify the presence of ecstasy-like substances (MDMA, MDA, MDE), but cannot differentiate between them nor tell how much of these substances a pill contains. It can also identify the presence of some non-ecstasy substances and/or the absence of ecstasy. There are, however, chemicals which do not cause a reaction with the ecstasy-testing kits and just because a pill tests positive for an ecstasy-like substance, this does not mean that the pills are pure or safe. They may contain a wide variety of other safe or dangerous chemicals, such as PMA that does not show any colour change. In such unclear cases, in some Member States samples are sent to official laboratories for a complete identification.

**Immunological tests** are based on the reaction of a (more or less) specific antibody against a substance (drug) and the visualisation of this reaction. In most cases, commercially available immunotest-systems for urine drug tests are used.

**Chromatography** is the separation of a mixture of compounds into its separate components and is furthermore widely used for the identification and determination of the chemical components in complex mixtures.

To fulfil their preventive and informing tasks, pill-testing projects have to guarantee fast and reliable qualitative as well as quantitative data. Pill identification is fast but not reliable at all. Marquis tests are fast and cheap but their validity is restricted to a couple of psychoactive substances. In terms of qualitative results nothing can be said about possible adulterations or unexpected substances such as PMA. Quantification is not possible at all. From an analytical point of view, colour reaction tests should only be used in combination with pill-identification lists as is done for example by the Dutch DIMS project. Immunological tests cannot be used for pill identification. Chromatography can be quite fast (15 minutes), is very reliable, yields qualitative and quantitative results and can be used on site (as shown by Pilot-E and ChEck iT!). Given that the budget for pill-testing interventions is limited, the most suitable procedure for on-site pill-testing projects seems to be to find partners that have the necessary chromatographic know-how and the analytical devices (a version of chromatography, possibly High Pressure Liquid Chromatography, maybe in combination with pill identification).

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## THE PROBLEM OF EVALUATION

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Five out of eight established projects in the study have analysed at least some evaluation questions, but only two of them claim to have analysed “most questions”

or to have carried out a full evaluation as referenced in the evaluation guidelines promoted by the EMCDDA. The assessment of project processes and project goals is a characteristic of professional projects and a prerequisite for public funding. There are, however, a couple of reasons why up to now an evaluation culture in the field of drug checking has not been established. As pill testing is a relatively new concept in the fields of public health or prevention, there is hardly any knowledge or experience with useful and scientifically based evaluation instruments. Many organisations in the pill-testing field do not have the financial resources and/or scientific know-how to design suitable evaluation instruments for pill-testing projects. Process evaluation gets easier the more one knows and documents what is going on. However, when considering the circumstances of working at raves, documentation is only possible in a quick and superficial way. Outcome evaluation is very difficult, if not impossible to design in this specific setting. Many projects only see their visitors once or twice, therefore it is very difficult to find out whether the information from the project finally leads to a more health-oriented consumption of illicit drugs in comparison with a group of people who did not receive that information. In short, there is so far no real "state of the art" as regards pill-testing evaluation and it is not possible on the basis of the current situation to provide "hard" outcome data to policy-makers in order for them to decide scientifically upon the value of setting up on-site pill testing interventions.

Creative and thorough scientific discussions need to be held to provide suitable tools for evaluating pill-testing projects in the future. A focus on process evaluation as a first step is suggested for this setting. *ChEck iT!*, for example, describes variables and methods for "on-site pill testing", "on-site information talks" and "running a web page" and employing questionnaires, interviews and documentation sheets. An external evaluation of "Pilot E"<sup>1</sup> describes similar methods and approaches and also deals with the topic of "giving out information material".

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## DISCUSSION AND CONCLUSIONS

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- Pill testing interventions are important measures to enter into contact with hard to reach populations and to raise their interest in preventive and harm reduction messages.
- On-site pill testing interventions should closely be linked to information provision with preventive and "safer use" messages, through a wide range of information supports.
- Cooperation with local authorities and especially with the police is essential.
- Investment in high quality analytical tools (quantitative and qualitative detection) which can be transported to the intervention sites is a relevant element.

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<sup>1</sup> Thomas, Ralph (2000), *Evaluation Projekt "Pilot-e" der Stiftung Contact Bern*, Bern: Contact Bern, unpublished report.



- The information talks with potential consumers should not only focus on the substances but also on their consumption and related behaviours at raves and in clubs (legal, sexual, social aspects).
- Despite the lack of empirical data, for health systems in general and information and prevention projects in particular, it is crucial to know about new substances and consumption trends, otherwise there is a high risk of losing credibility with well-informed users of psychoactive substances. Pill-testing projects can be an important source of information on new substances and consumption trends as they are in closest possible contact with the relevant scenes, more so than other organisations within the prevention system. Furthermore, they have an insight into most of the substances that are actually being consumed and know by whom, where, how and why these substances are being consumed.
- Pill testing interventions have to be part of a global strategy for prevention and harm reduction in recreational settings.
- By using the information from on-site pill testing interventions, a national warning system could deepen its data pool in terms of social contexts: who are the people consuming these substances, how, where and why are they consuming these substances in this and that particular way and which information can be passed on to potential consumers in a meaningful and successful manner?
- Due to the lack and difficulties of evaluation, on the one hand there is still no strict scientific proof for the protective impact of on-site pill-testing interventions but on the other hand, there is also no scientific evidence to conclude that such interventions rather promote drug use or might be used by dealers for marketing purposes. Drawing together pieces of evidence is, however, often a first step for deciding on new intervention models.
- There is a need for more research and evaluation studies on the whole range of effects of on-site pill-testing interventions.