

RANDOX
TOXICOLOGY



Customer Testimonials



Advancing the Future of Toxicology

Introduction

For over 35 years Randox continue to place assurance and accreditation at the core of the manufacturing process, to ensure a high standard is sustained. Built on a foundation of continuous innovation, our significant re-investment in research and development has allowed us to introduce novel tests and pioneering technology to the market. With the ability to raise antibodies and develop assays at our UK Headquarters, Randox Toxicology determine the optimum target compounds with excellent specificities.

Advancing the future with the world's largest toxicology test menu, which detects over 500 drugs and drug metabolites, you can trust Randox Toxicology to deliver a solution for whatever your laboratory testing requires. Our global Technical and Engineering support means that no matter where your laboratory is in the world, we can guarantee a rapid response to our customer's needs.

Biochip Array Technology

Biochip Array Technology is an immunoassay testing platform for the simultaneous multi-analyte testing of a panel of related tests. The technology works by combining a panel of up to 44 related tests on a single Biochip with a single set of reagents, controls and calibrators. Competitive chemiluminescent immunoassays are employed for the Biochip arrays. A light signal generated from each of the test regions on the Biochip is simultaneously detected using digital imaging technology and compared to that from a calibration curve.

Key



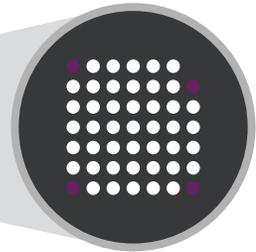
Discrete test region



Quality control spot



7x7 Biochip surface



44 discrete test regions on each biochip for individual analytes

Directorate of Forensic Science Laboratory *India*



Dr NC Chutke
Deputy Director



Evidence Investigator

One of the biggest attractions of the Evidence Investigator was the fact that it has given us access to the world's largest test menu and Biochip Array Technology. Mephedrone, also known as 'Meow Meow drug' is one of the most commonly used drugs haunting Mumbai, which has the same known effect as amphetamines and ecstasy.

Now with the Randox NPS I panel we will be able to crackdown on this drug and test for it more accurately, along with other drugs of abuse in blood, urine and other forensic specimens commonly required for forensic investigations. Since the installation of the Evidence Investigator our laboratory is able to screen for multiple samples faster, more efficiently and accurately, increasing our laboratory's capabilities in both forensic science and crime scene investigation.



**Since the installation of the Evidence Investigator
our laboratory is able to screen for multiple samples faster,
more efficiently and accurately**



Ocean County Sheriff's Office

USA



Matthew R Wood
Laboratory Director



Evidence Investigator

Our experience with the Randox Evidence Investigator has been outstanding. The Evidence Investigator was the ideal solution to our blood and urine screening analysis that targeted more compounds of interest than our previous assay. Additionally, the Randox product team was able to develop a Biochip that met the SWGTOX recommendations for screening DUID samples and meets industry suggested target analytes and levels.

The Biochip has allowed us to increase the panel of compounds that we screen prior to confirmation and is flexible enough that we can also add screening for novel psychoactive substances when necessary.



The Evidence Investigator was the ideal solution to our blood and urine screening analysis that targeted more compounds of interest than our previous assay



Medlab Diagnostics PVT LTD

Maldives



Hussain Faiz
Laboratory Manager



Evidence Investigator

We are very happy with Randox products and services. Randox has gained our full confidence and trust in their product quality. The support and services rendered by Randox has encouraged us to venture into new markets and seek new customers. To give an example, we were able to supply and install the Evidence at The National Drug Agency, Maldives.

With continued encouragement and support from Randox Toxicology, we are planning to further expand our market with Randox Clinical. With all the parameters included in the Biochip, we don't have any issues with storage of multiple reagents or controls.

We were using a dry chemistry method for toxicology sample processing, which we ran on limited samples and took a long duration to process. With the introduction of the Evidence Investigator at our laboratory, the limitation on the number of samples per batch and process time has been removed. This has increased our efficiency and accuracy of sample processing. Further the supply of reagents has been very efficient and the option of customising parameters was provided.



**Randox has gained our full confidence and trust
in their product quality**



Ministry of Interior, Forensic Laboratory *Kuwait*



Madam Mona Subaih Al Saqeel
Director of Forensic Laboratory



Evidence

During the start-up time of the Evidence immunoassay analyser using the Biochip Array Technology, research and method development had been undergone by the toxicology specialists of the laboratory to evaluate the technology and test samples. The results and findings correlated well with drug discovery by the confirmatory techniques of LCMS and GCMS to generate a report of usability of the Randox Evidence as a pre-screening sample tool.

The evaluation in conjunction with the capability of the analyser detecting JWH positive cases during pre-screening resulted in a better work flow towards confirmatory quantification analysis. The positive attitude of the staff towards the implementation and workability as a routine screening device was partially possible due to the continuous support of the Randox distributor in Kuwait at the time.

We have a high sample throughput of cases within the toxicology department that was not possible prior to using the Evidence. Now it is also possible for fast detectability of JWH and designer drugs in body fluid samples using Biochip.



**Resulted in a better work flow towards
confirmatory quantification analysis**



Goa Medical College, Department for Forensic Medicine & Toxicology India



Dr Andre Victor Frenandes
Head of Department



Evidence Investigator

This is the first time that such a high calibre analyser has been installed within a medical college in India. With the Biochip Array Technology we now have the capability to understand emerging drug cases, reduce our back log and turn around cases in a timely fashion. The Evidence Investigator has made the whole screening procedure easier, quicker and given us accurate results.

Randox Toxicology has given us access to the world's largest test menu and at the minute we are working towards screening all suspicious cases for drugs using Randox's DoAI+ panel that tests for classic drugs of abuse including methadone, opiates and MDMA. Moving forward we hope to conduct a detailed analysis for drugs of abuse .



The Evidence Investigator has made the whole screening procedure easier, quicker and given us accurate results



Hospital Miulli, Complex Operating Unit of Clinical Disease *Italy*



Dr Edmondo Ceci
Laboratory of Biochemistry



Evidence Investigator

I am very happy to have started this scientific collaboration. The Evidence Investigator is extremely user friendly, Randox Toxicology kits, for the determination of drugs in both urine and whole blood, are very effective and easy to use.

We have achieved great results in a faster time and saved costs for routine analysis. We hope to be able to continue this partnership for growth and innovation in our laboratory.



**We have achieved great results in a faster time and saved costs
for routine analysis**



ASST Grande Ospedale Metropolitano Niguarda Italy



Dr. Adriano Masarin
Laboratory Manager



Evidence



MultiSTAT

The toxicology area where we installed the Evidence analyser is inside the central laboratory and monitors various samples of car-crash patients (whole blood, urine and hair samples). The routine amount is roughly 120 whole blood, 25 urine and 60 hair samples per month.

We have used the Evidence since 2010, first running urine kits and then whole blood from July 2012. Since March 2018 the laboratory has tested using the Evidence MultiSTAT instrument, providing good results.

The DoA routine has been improved with the use of Randox's Evidence analyser, using Biochip Array Technology. The laboratory can choose from a large number of panels and Randox have implemented DoA panels for the Italian market. Overall, the DoA panel is very useful to give an indication on samples in a very short time.



The DoA panel is very useful to make diagnosis or give an indication on samples in a very short time



Riga Centre of Psychiatry and Addiction Medicine *Latvia*



Tatiana Khodasevitch
Forensic Expert/Head of Laboratory



Evidence

The Laboratory of Forensic Chemistry and Toxicology, Riga Centre of Psychiatry and Addiction Medicine performs analyses of biological matrices for the presence of classical drugs of abuse as well as new psychoactive substances (NPS). The laboratory receives specimens to be analysed from all parts of Latvia.

Routine analyses of NPS has been implemented in the laboratory since 2013, using the Evidence, reagents, DOA III, DOA IV, NPS I, NPS II. The routine use of Randox's Biochip Array Technology has allowed us to significantly improve our analysis, especially for NPS. The results of our work with this technology are regularly discussed at regional conferences as well as TIAFT meetings.

The routine screening with Biochip Array Technology gave us the possibility to increase a list of drugs to be analysed, improving the quality of analysis and decreasing time.



The routine use of Randox's Biochip Array Technology has allowed us to significantly improve our analysis



Institute of Forensic Science *Slovakia*



Pharm Dr. Katarína Jankovičová
Senior Expert



Evidence Investigator

A highly positive feature about Randox's Biochip Array Technology is its wide menu of matrices including forensic matrix, whole blood and oral fluids for screening purposes with semi-quantitative results. Biochip Array Technology's specificity and selectivity of reaction is a great benefit to us, providing detailed drug group classification and dividing these into sub-classes. Randox Toxicology's continuously expanding test menu is vital for the forensic field.

The most interesting matrix and finding that we successfully detected thanks to Biochip Array Technology was breast milk that tested positive for methamphetamines, followed by a successful confirmation via GC-MSD. Thanks to the Evidence Investigator's sensitive and specific Biochip analysis platform, we can detect a higher percentage of positive samples during the screening process and have evidence of a decrease in false negative sample reports. Having this good quality screening method results in accurate drug detection, providing stronger evidence power for the police in criminal proceedings.



**Having this good quality screening method results
in accurate drug detection**



A close-up photograph of various pharmaceuticals. In the foreground, there is a blue blister pack containing several light blue capsules. To the left, a red blister pack is partially visible. In the background, several pink and light blue capsules are scattered on a dark wooden surface. The text "ADVANCING THE FUTU" is overlaid in white on the right side of the image.

ADVANCING THE FUTU



ATURE OF TOXICOLOGY

Department of Scientific Services *Brunei*



Angeline Chua
Scientific Officer



Evidence

We have had two Randox Evidence analysers in the laboratory since 2015 and so far, the after sales service and support provided by Randox and their distributor here in Brunei has been excellent. They have been very helpful with answering any queries we have had regarding the Randox Toxicology analysers and quickly resolving any issues.

With the use of the Randox Evidence analyser, we are now able to test for more drugs of abuse concurrently and have been able to improve our turnaround time.



We are now able to test for more drugs of abuse concurrently and have been able to improve our turnaround time



Cukurova University, Department of Forensic Medicine Turkey



Dr. Nebile Dagioglu
Society of Forensic and Clinical
Toxicology General Secretary



Evidence

The forensic toxicology laboratory performs a preliminary screening test, using Biochip Array Technology for routine analysis. Illicit and therapeutic drugs, pesticides and alcohol in biological samples (urine, serum or whole blood and hair) are detected and the results are confirmed by using chromatographic devices such as LC/MS/MS, GC/MS, GC/Headspace and GC (ECD and NPD) with high sensitivity and selectivity. Thus, the toxicological evaluation is made with the exact findings obtained by establishing the cause-effect relationship by the experts.

Randox Toxicology products and services have been used in order to perform routine screening tests in our laboratory since 2014. In the first year, the Randox Evidence Investigator Immunoanalyser was used, followed by moving to the Evidence. This has been used for drugs of abuse testing in whole blood and urine with drugs of abuse kits in our laboratory.

The Randox Evidence Immunoanalyser is a fully automated analyser, which can perform 180 whole blood or urine samples in a short time. It provides a comprehensive range of 10 drugs of abuse testing assays and has extensive qualitative and semi-quantitative measuring ranges for drugs of abuse tests.



**Extensive qualitative and semi-quantitative measuring
ranges for drugs of abuse tests**



The Royal Oman Police Forensic Science Laboratory *Oman*



Dr Farida Al-Harthy
Chief of Chemistry Section



Evidence Investigator

I have worked with Radox Toxicology's Evidence Investigator analyser for over four years now. In fact, Radox Toxicology have helped us to find a lot of solutions in the toxicology field, especially in drug detection. The service team is very helpful and always update us with current news in our field. Moreover, the team at Radox are always seeking for customer satisfaction through their rapid response to our calls.

Through my experience, the Evidence Investigator is a good instrument with a high efficiency, especially in blood screening. The two important advantages for our work that have been achieved with this analyser are, reducing the sample volume required to do a test and the multiple sample types that can be used.



**Radox Toxicology have helped us to find a lot of solutions in
the toxicology field, especially in drug detection**



Alabama Department of Forensic Sciences (ADFS) USA



Dr Curt Harper
Toxicology Discipline Chief



Evidence

Chief Toxicologist, Dr. Curt Harper looked at various options and found the Evidence analyser to be best suited to their needs. They opted for an automated high throughput drug screening solution that also allowed them to simultaneously increase their scope of analysis. The wide menu of tests in particular attracted them to the Randox Evidence analyser. They designed a custom chip that was later transitioned to the DUID/DoA ULTRA kit.

ADFS now uses the 20 panel DUID/DoA ULTRA chip for all analyses including both human performance and postmortem testing. The Evidence analyser has increased their efficiency and decreased their backlog.

Dr. Harper has presented nationally and internationally on the benefits of this method and the validated panel for toxicology testing in his laboratory.



**The wide menu of tests in particular attracted
us to the Randox Evidence analyser**



Evidence Range of Analysers

The Evidence Series of immunoassay analysers are powered by Biochip Array Technology and combine the latest technological advances for drug residue detection using immunoassay principles. This has resulted in the creation of four systems; the Evidence Investigator, the Evidence MultiSTAT, the Evidence Evolution and the Evidence, which allow for simultaneous semi-quantitative or qualitative analysis of up to 44 tests per sample.

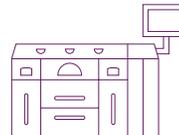


Evidence MultiSTAT

Fully automated, bench top analyser

132 tests per hour

Ideal for workplace, custodial or laboratory drug testing

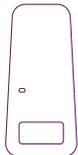


Evidence Evolution

Fully automated, random access analyser

Up to 2640 tests per hour

Ideal for high throughput laboratories

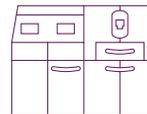


Evidence Investigator

Semi-automated, bench top analyser

2376 tests in 70 minutes

Ideal for small to medium sized laboratories



Evidence+

Fully automated batch immunoanalyser

5940 tests per hour

Ideal for high throughput laboratories

Local Engineers. Global Coverage

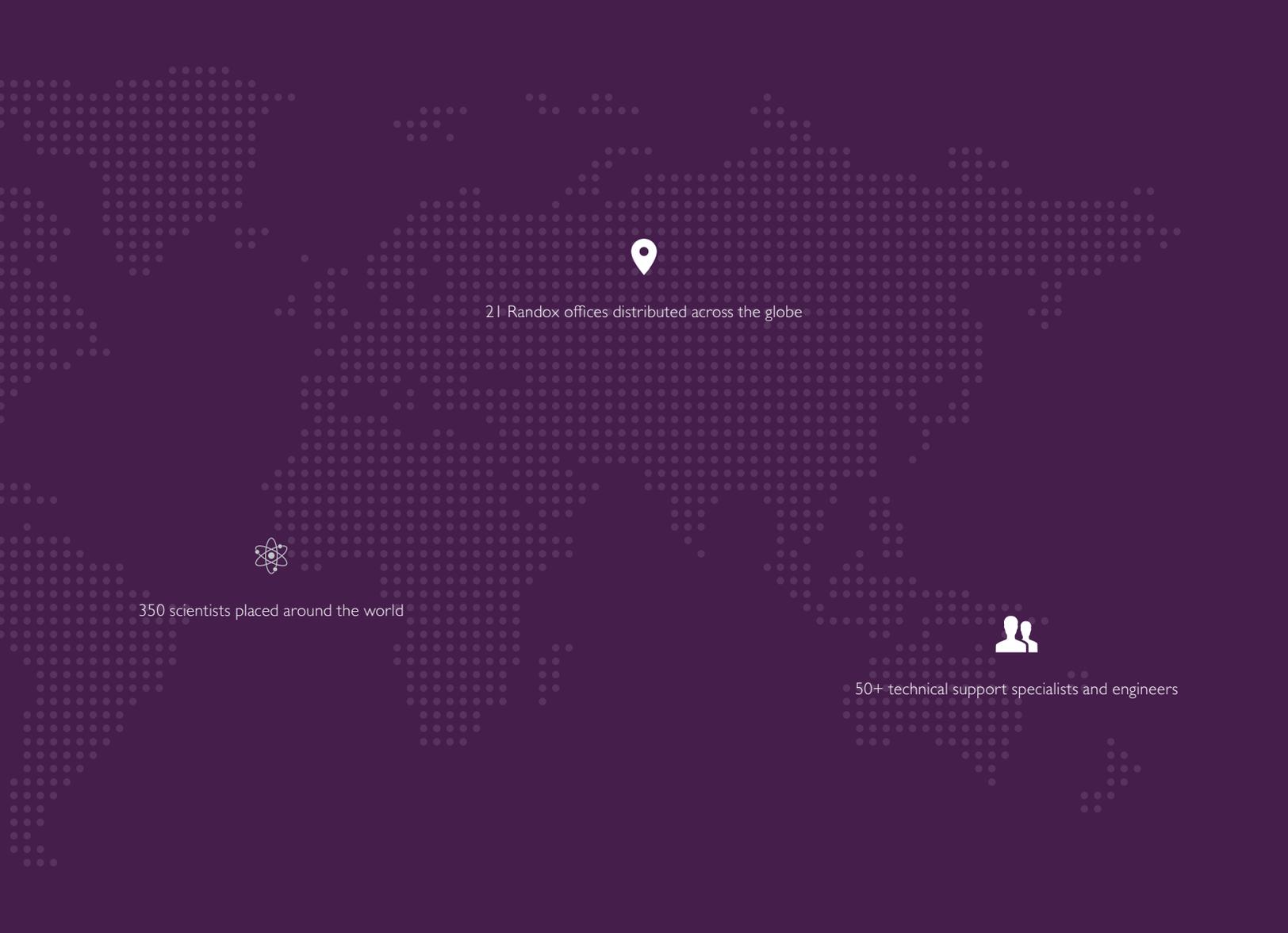
Randox Toxicology provide customers with an unrivalled support service. A team of highly trained specialists are on-hand to deal with any technical and service issues you may have.



39 trained service engineers



145 countries covered by our distributor network



21 Randox offices distributed across the globe



350 scientists placed around the world



50+ technical support specialists and engineers

 Radox Tox



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