

28 February 2020

English only

Commission on Narcotic Drugs

Sixty-third session

Vienna, 2–6 March 2020

Item 5(c) of the provisional agenda*

**Implementation of the international drug control
treaties: International Narcotics Control Board**

Conference room paper submitted by Turkey**

The attached document entitled: “Expert Group Meeting on Innovative Methods to Track Precursor Chemicals, 26–27 November 2019, Antalya”, has been submitted by Turkey for consideration by the Commission under agenda item 5(c) at its sixty-third session.

* [E/CN.7/2020/1](#).

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Expert Group Meeting on Innovative Methods to Track Precursor Chemicals 26–27 November 2019/Antalya

Expert working group meeting comprised of private and public stakeholders from appropriate disciplines proposed a good opportunity to learn about the innovative methods to track precursors especially acetic anhydride. In the meeting, five topics have been tackled. The discussed topics were related to the possibility, practicability effectiveness, cost, and proportionality of the organic tagging and tracking method (Organic code System).

Key discussions:

-exploration and assessment of the global situation of the production, trade, and trafficking of acetic anhydride

-illustrated by the INCB consultant's modelling

-case reports presented by:

-Republic of Turkey, Department of Smuggling, Intelligence, Operation and Data Collection department

-Republic of Turkey, General Directorate of Customs Enforcement

-introduction to innovative tagging and tracking technique for acetic anhydride presented by DS Bio and Nanotechnologies (Organic code System) (Annex 1), illustrated by case study of the said method in the fight against IED via prevention of smuggling of risky fertilizers

-presentation of academic experiments and results which has tested the above mentioned method in terms of:

-purity

-data recoverability

-durability

-health concerns

-discussion and debate among experts about the above-mentioned topics

Suggested recommendations:

As a result of the presentations and discussions in this meeting, the following recommendations have been revealed:

- The ongoing national and collaboration between international authorities is the main tool for consolidating the international fight against the diversion of Acetic Anhydride for heroin manufacturing.

- The necessary and effective coordination and collaboration both in the administrative control and in the supervision.
- The need to promote collaboration with the private sector is highlighted with the signing of voluntary collaboration agreements.
- Coordination between drug-fighting units with other national relevant authorities such as: Ministry of Interior, Ministry of Health, Department of Counter Narcotics, Law Enforcement Department and civil society relations.
- The partnership between government and industry based on shared goals and responsibilities should be encouraged.
- More effective participation of national authorities would be desired.
- Giving priority to tackling the issue of acetic anhydride diversion on the domestic level, considering that the majority of illicit acetic anhydride comes from domestic trade, not international trade.
- In order to enable practical application of the organic code system, applying the system first in Turkey depending on the decision of the government of Turkey as a pilot study, then in Pakistan depending on the decision of the government of Pakistan.
- Addressing the issue of dubious companies which contribute the trafficking of acetic anhydride especially on the domestic level.
- Suggesting nations to make amendments in national bureaucratic and legal systems so that the delays in investigations, which have an adverse effect on the effectiveness of the investigation, can be avoided.
- Adding to the agenda of the upcoming INCB Task Force Meeting to combat the diversion of chemical precursors, especially acetic anhydride.
- The participation of universities is of the utmost importance in the creation of new methods and technologies against the diversion of chemical precursors.
- Enabling and further researching into innovative technologies such as the organic code as so to fulfil the requirements of clause 6 of Resolution 62/1 of The Commission on Narcotic Drugs.
- Encouraging the use of the PICS system since it is a global reference of incidents involving precursors chemicals.
- Keeping the national database (by competent authorities) of companies dedicated to the import and export of chemical precursors updated.
- Improving the effectiveness of PEN Online system by strongly encouraging states to use the system in international trade of chemicals.

In conclusion, participants have welcomed the organic code system as an innovative way to track the supply-chain of acetic anhydride and to detect the point of diversion, and to tackle the diversion and trafficking of acetic anhydride, noting that the system must be further developed for a global scale application.

(The representative of Iran has suggested to replace the word “to welcome” with “to consider”)

Annex:

Organic Barcoding

The steps for Identification of the products, recovery of the barcodes from identified products and verification:

1. Interaction with the product by designed equipment/method and combining of organic barcodes for identification of product
2. Sampling from identified products
3. Decapsulation of DNA strands using methods optimized for the isolation of organic codes from samples taken
4. Identification of DNA sequences isolated from the product using the qPCR technique and verification of the organic code system used for identification

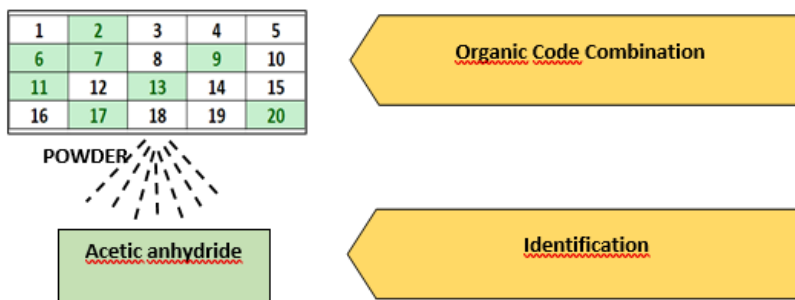


Figure 1. Organic barcode identification flowchart

New and unique barcodes are produced by combination of unique barcodes. An inimitable identification system is obtained by this way. These codes can not interact with each other. These codes are matched with the qr code or rfid on the package by a specific software. The matched data is matched with a different code at main tracking system database. The organic code would be processed when the barcode on the package is read or processed on number tracking software. This is how organic code is processed dynamically in every step, and addition of organic code in every step would be unnecessary. The process is tracked dynamically.

Experimental - The powdered organic codes were added and mixed into AA for identification and after that it was used to produce some heroin. The chlorination was performed in the end of the synthesis. Organic barcodes were isolated and detected from both AA and heroin even the chlorination was performed. The durability of organic barcodes was measured by sampling in every step of the synthesis reaction. Some of the results were given at the Figure 2.

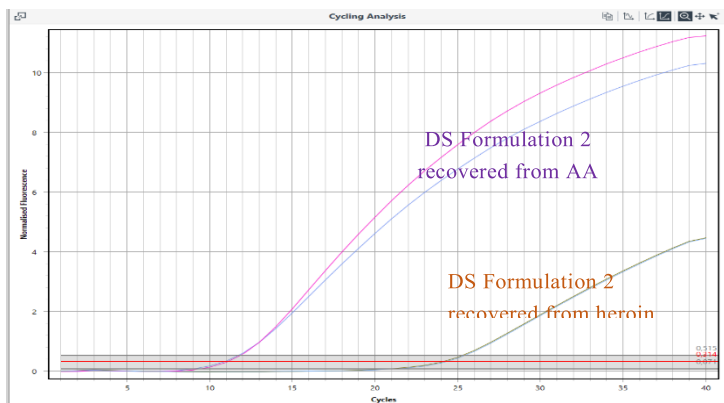


Figure 2. qPCR Results

According to Figure 2, organic barcodes were detected from the heroin after the synthesis reaction which means the organic barcode is stable under the harsh conditions like heat, pH effect, filtration and other purification steps.

Purity tests were performed on either identified and unidentified AA samples to understand the effect of organic barcode on purity according to EP (European Pharmacopeia, Reagents, 4.1.1). The result of this test shows there is no significant difference between two samples.

4 different patents have been accepted regarding to this organic barcode technology.
