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Guide to Best Practices to Prevent the Counterfeiting of Precursor Chemicals

Coordinating Country: Argentina

Group Members: Trinidad and Tobago and Argentina.

BACKGROUND:

At the Meeting of the Group of Experts held in Quito, Ecuador, from July 11 to 15, 2011, the Argentinean delegation made the rest of the group aware of its concern regarding the difficulties faced when trying to trace back the commercialization chain of precursor chemicals found in dismantled clandestine drug laboratories.

The representatives of Prelac, Peru, Chile, Uruguay, Bolivia, the United States of America, Ecuador, Trinidad and Tobago, Haiti and Brazil, echoed this concern which led to the formation of a subgroup that devised a plan of action for the purpose of developing a Guide to Best Practices to implement the Intra Batch Traceability System, in order to implement control measures aimed at identifying the packaging of each production batch.

During the Meeting of the Group of Experts held in Santo Domingo, Dominican Republic, June 25 to 29, 2012, the Group approved the above mentioned "Guide to Best Practices for the Intra Batch Traceability System."

At that meeting of the Group of Experts, Argentina stated that it was necessary to go beyond the step already taken and to develop a system of "chemical marking" of the precursor chemical as an additional security measure to those already included in the packaging, in order to be able to retrace precisely the commercialization chain of the product when seized precursor chemicals have been repackaged (note: repack already indicates transition from one container to other) to containers without any identification labels or with fake labels, and thus, be able to pinpoint the latter stages of the chain or the point of diversion.

OBJECTIVES:

To prevent that controlled substances, which are very important for different industrial and commercial activities, are diverted to illicit drug production that could constitute a major threat to society.

To get the private sector to understand the importance of operating as responsible corporate citizens and social responsibility given the sensitivity of the substances they handle.

Manufacturers or re-packagers should implement a system of "chemical marking" to identify their products so that, should control authorities request it, it would be possible to determine whether the product was indeed manufactured or repackaged by the business in question and, if so, identify the

batch number (if it is feasible) for that product through the use of a laboratory sample. Furthermore, it would also be possible to identify who purchased the specific batch.

To develop a guide to help manufacturers and re-packagers from the member states to implement a identification and traceability system of precursor chemicals packaged within the same batch, which, after chemical testing in the laboratory, will make it possible to identify the manufacturer and the production batch of substances found repackaged in clandestine laboratories.

Control System:

The purpose of this guide to best practices is to provide guidance to businesses in member States in order to implement a "***Batch Chemical Identification System"*** to determine who purchased each batch of controlled chemical substances in cases where there has been intentional transfer of the substance to a different container, or where information regarding the batch and container has been deliberately altered or erased from the labels.

At first, this traceability system would be implemented for organic solvents and non-corrosive substances.

If the seller (manufacturer or re-packager) of chemical substances could identify the batch number and all the information related to it (number of customers to whom each batch of chemical substances was sold, the properties of the substance) by the use of a "mark" then, when a case of transfer of substances to non-descript containers without labels is detected in a clandestine narcotic laboratory, it would be possible to determine:

- At least who was the first purchaser of that precursor chemical from the manufacturer.
- Where the precursor originated, tracing back the history of locations and transfers along the distribution chain which will facilitate the detection of anomalies within the product's legally approved supply chain.
- What was the commercialization chain of this product by retracing its stages until it reached the hands of those who used it to produce illicit drugs and, thus, identify the customer who helped carry out this type of illegal operation.

Depending on their financial resources and materials handled, businesses may opt for one or a combination of the traceability systems described below.

Afterwards, each manufacturer or re-packager must inform their country's control entity as to which system or combination of systems it has chosen.

This document offers manufacturers of precursor chemicals in States Party, two possible systems which incorporate the latest technological advances.

As a result of continual technological advances and cost oscillation, the systems described below are merely examples and that complementary or substitute version of analog systems may be used, to develop a system of "chemical marking" of the precursor chemical as an additional security measure to those already included in the packaging.

1. Microchip RFID:

It consists of a tiny, radio-frequency tracking device, about the size of a pinhead, which can be placed in the container itself and is capable of holding a large amount of data about the product.

This type of device, destined to substitute the bar codes currently in use, can store all the data about a specific substance, such as: package number within a given batch, who purchased that substance, who manufactured it, who re-packaged it and any other information deemed pertinent.

Businesses will place microchips with special characteristics in each container within a specific batch.

Microchips must be innocuous in order to avoid altering the chemical properties of the substance but they must also be identifiable in the laboratory in order to be associated with a specific batch number.

Such association of microchips with specific manufacturing batches will enable each manufacturer to inform the control authority with certainty and precision not only whether it had produced a given substance, but also who had purchased it.

It should be pointed out that this system is useful only in cases in which the original container, either opened or closed, has been preserved and as long as the microchip has not been intentionally removed by the criminal organizations.

2. Nano Particles:

Nanoparticles (nanopowder, nanocluster or nanocrystal) are microscopic particles with one dimension less than 100 nm (nanometer [nm] =1 billionth of a meter).

The most important applications of nanoparticles have to do with improving existing materials and introducing new ones. For instance, just to cite a few examples, nanoparticles are being used in the manufacturing of high performance tires; fibers for the production of fabrics with anti-stain or wrinkle prevention properties; cosmetic products, pharmaceutical products and new therapeutic treatments; nanostructured water filters and membranes; to improve production processes through the introduction of more efficient or stronger materials and for the development of new materials to be used in the manufacturing of electronic products, aeronautics and the transportation industry as a whole.

The system would consist of incorporating nanoparticles of a certain type, to be determined by experts in this field in each business, in a way that it did not interfere with the composition and final use of the substance.

The number of those particles incorporated into the substance should be such that some of them always remain in the container once the substance is being used or transferred to another container.

These particles, the same as those placed in every other container within the same batch but different from those found in containers from any other batch, shall be the mechanism to identify each substance produced.

Then, using a non-intrusive identification method from outside the container and a light refraction system, it will be possible to determine the type of nanoparticles detected in a specific container found in a clandestine narcotic laboratory.

This system is useful in both, cases in which the original containers, either opened or closed but containing traces of the chemical substance, have been preserved as well as in cases in which the substance was transferred to another container.

Role of the manufacturer or re-packager:

With the implementation of the second system proposed and the identification of the nanoparticles, the manufacturer or re-packager should be able to report with a high degree of certainty to the requesting control or judicial authority in their country, the specific batch, the container number and who purchased the container found in a clandestine narcotic laboratory.

As previously stated, the system would also work if the substance was transferred from the original containers to a larger container because, in that case, several nanoparticles identifying several original containers would coexist in the larger container and, therefore, it would be possible to determine the origin and identification number of each of the original containers, as well as, if it is one or more manufacturer or re-packager.

The system would also be helpful in preventing counterfeiting since containers missing certain type of nanoparticles would not be the original containers of the manufacturers.