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(54) **Anti tampering device**

(57) Hereby the invention refers to the achievement of the Maximum Security System designed to protect against tampering by intrusion and thermal tampering. It is set up by:

- Consumer's material: sealed plastic envelope containing the equipment for the drawing samples. Packaging and sealing of them, the fill into the documents.
- Recyclable material

- Blue and orange Maximum Security Thermal bags for samples of first and second analysis and Security Shipment Isothermal bag.

EP 1 455 326 A2

Description

[0001] THE SECURITY MEASURES AND THE MAIN CHARACTERISTICS OF THE MAXIMUM SECURITY SYSTEM are :

1) High security tape which breaks down when touched, composed of ultra-sensitive, polyester material which is code-printed.

2) A snapping device TIK seal manufactured with two different kinds of synthetic resin, both having different reactions to violation attempts.

The TIK seal is supplied with high-relief numbering, molded during the manufacturing process, that is at the moment the fluid mixture is put into the mold. Each and every seal has a different numeric position, seven digits which don't line up, making it impossible to even hypothesize duplication or substitution. This high-relief numbering system is without repetition so it does not allow any substitution of code numbering with another seal having the same code numbering printed on with the purpose of avoiding tampering or substitution of the whole packaging that has to be protected.

Using the high relief numbering it is possible to transfer directly the seal code onto the document exactly as the seal has been manufactured. Direct number is easy to do and ends the tiring task of copying numbers, which would leave great margin for errors.

3) Ball-Zip and Maximum Security Shipment Bags have not been sewn nor zipped shut but sealed by electronic and ultra-sonic welding high security Ball-Zip.

[0002] The drawing and the packaging of organic liquid samples in the security Anti-Doping system has been based on four security elements as the following way:

- The seal tape without code number must be applied on the glass bottles if necessary, for the first liquid drawing.
- The seals tape coded must be applied directly on the cap and on the glass bottles for the first and second drawing samples (A + B).
- Glass bottles overturned must be set in the plastic capsules which must be sealed with the maximum security TIK seal, manufactured with the first type of synthetic resin (Polycarbonate). The TIK seal is supplied with a high relief numbering. The overturned position of glass bottles into the capsules avoids samples to be reached through the synthetic resin cap and displays tampered evidence when in-

terfered with.

- Once sealed, the two plastic capsules (one contains samples that are needed for the first analysis A and the other for the second analysis B) must be set inside the Ball-Zip, Maximum Security Isothermal bags.

- The Ball-Zip must always be sealed with TIK seals, having colours and codes with high-relief numbering, different from those used to seal the two capsules, made up of the second resin substance (Polypropylene).

[0003] The Security System is supported by KITS labels having the same code as the TIK seals printed on them which must be used to complete the documents avoiding in this way to transfer directly every tiring task of copying code numbers and manual transcriptions by the authorized specialist in charge of drawings

The Maximum Security Thermal Bags must be set inside the Maximum Security Isothermal Shipment Bag; the System once sealed by TIK or PLIK seals, can be utilized for more thermal bags belonging to different people wanting to be tested. This Isothermal Bag, packed and sealed, is ready to be send throughout the laboratory for analysis and it's able to protect samples from:

- a) Tampering sealing device by intrusion or substitution;
- b) Thermal tampering.

[0004] All of the four mentioned elements used for sealing are different one from the other to guarantee that the analysis has been done on the real organic liquid of the person wanting to be tested.

[0005] The certainty in being able to identify any abuses which may be committed is so high that those who may want to tamper with the system are greatly deterred from committing unlawful acts. It is also therefore impossible for the person whose organic liquids are being tested to hypothesize tampering of the liquid in question.

[0006] Once the Ball-Zip arrives at the analysis laboratory, the plastic capsules are taking out allowing the operators to test the glass bottles A at first and the glass bottles B after.

In this way it will be possible to save immediately the two isothermal bags. The plastic capsules sealed with polycarbonate TIK seal, will be placed in a cold store where they will take very little room.

[0007] The system used by P.P.&C. s.r.l. is Environmentally Safe. The materials used for this system have been carefully chosen and developed with the aim of making them recyclable to avoid dispersion throughout the environment as well as avoiding the incineration of the pollutant materials.

Detailed description of invention

[0008] The invention will be better described by enclosed drawing-boards which should not be considered in any way a limit to the invention in itself. In this description the equal numbering of different drawings will show elements connected one another.

Drawing board list

[0009] Drawing board A and B explaining the elements contained inside the consumer material Kit.

- Graduated container for 1° drawing gathered in polypropylene material (drawing 1);
- Tape seals with or without code numbering, manufactured by polyester anti-tampering material (drawing 2);
- Graduated glass bottles (A+B), including lids and its undersides (drawing 3);
- Plastic P.E. capsules, lids including (drawing 4);
- Tik seals manufactured in polycarbonate and polypropylene (drawing 5);
- Adhesive labels having the same seals Tik colour (drawing 6).

[0010] The Maximum Security System designed to protect against tampering, intrusion, altering or substitution and thermal tampering is set up:

1) Consumer Material

The Anti-doping kit containing the equipment for the drawing samples, sealing glass bottles, sealing plastic capsules which contains reversed glass bottles, sealing of Maximum Security Thermal Bags, the fill into the documents, the Plik seal that must be used for sealing the security Shipment Isothermal Bags.

2) Recyclable Material

- Blue Maximum Security Thermal Bag able to contain N° 1 glass bottle (I analysis)
- Orange Maximum Security Thermal Bag able to contain N° 1 glass bottle (II analysis)
- Maximum Security Thermal Shipment Bag able to contain N° 8 A+B thermal bags belonging to different people.

3) Security Bags and Shipment Bags must be sealed with the Maximum Security Tik seal, supplied with high-relief numbering, moulded during the manufacturing process. Each and every seal has a different numeric position, seven digits that don't line up, making it impossible duplication or substitution.

The Maximum Security Thermal Bag measures ought to be chosen as it needed.

5 Claims

1. A High Security System exclusively designed to protect against tampering, for intrusion or substitution and to protect against thermal counterfeiting utilized for the drawing and packaging of samples in Anti-Doping field, assumption and administering of forbidden substances.

This system contains all of elements utilized for the drawing of organic liquid, samples packaging, equipment for their sealing and shipment under temperature control for at least 150 hours.

The Security System is supported by two kits adhesive labels having the same code as the Tik seals printed on them which must be used to complete the documents.

In add, using the high-relief numbering it's possible to transfer directly the seal code onto the document exactly as the seal has been manufactured.

This Security System aims to protect samples from harmful consequences related to counterfeited and withstands thermal attack.

This system is composed by the following three devices:

1) Antidoping Kit which contains consumers material that must be set inside the transparent plastic maximum security envelope, which is code-printed and supplied with receipt able to delivery avoiding intrusion, substitution, altering.

2) Blue (A) and Orange (B) Maximum Security Thermal Bag (see utility patent of January, 23rd 2003 Prot. RM 2003 U 000008)

3) Blue Isothermal Maximum Security Shipment Bag (see utility patent of January, 14th 2003 Prot RM 2003 U 000008)

2. The content of the sealed security envelope kit elements of consumer material (as described in A-B drawings) are :

- graduated container for first drawing gathered in propylene material (drawing 1);
- tape seals with or without code numbering, manufactured by polyester anti-tampering material (drawing 2);
- graduated glass bottles (A+B), including lids and its undersides (drawing 3) ;
- plastic P.E. capsules, lids, including (drawing 4);
- Tik seals manufactured in polycarbonate and polypropylene (drawing 5);
- Adhesive labels having the same seals Tik col-

ours (drawing 6).

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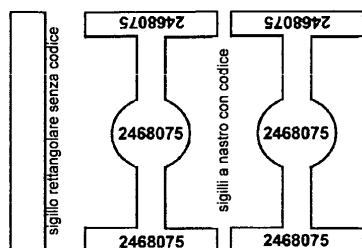
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Tav. A

ANTIDOPING KIT

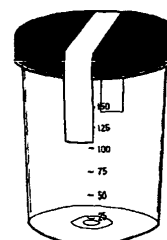
THE P.P.&C. SECURITY SYSTEMS OPERATIONAL INSTRUCTIONS. HOW TO USE THEM FOR THE DRAWING OF ANTI-DOPING SAMPLES.

Before starting the sealing procedure, the two tape seals, the two orange I.A. seals, containing a string and the four orange adhesive labels must be controlled to ensure they are identical.

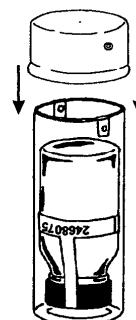
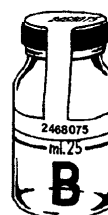
1 - Type adhesive seals manufactured with polyester material VOID.

1.1- Temporary seal to be used with a type of rectangular seal for 1° gathered container.

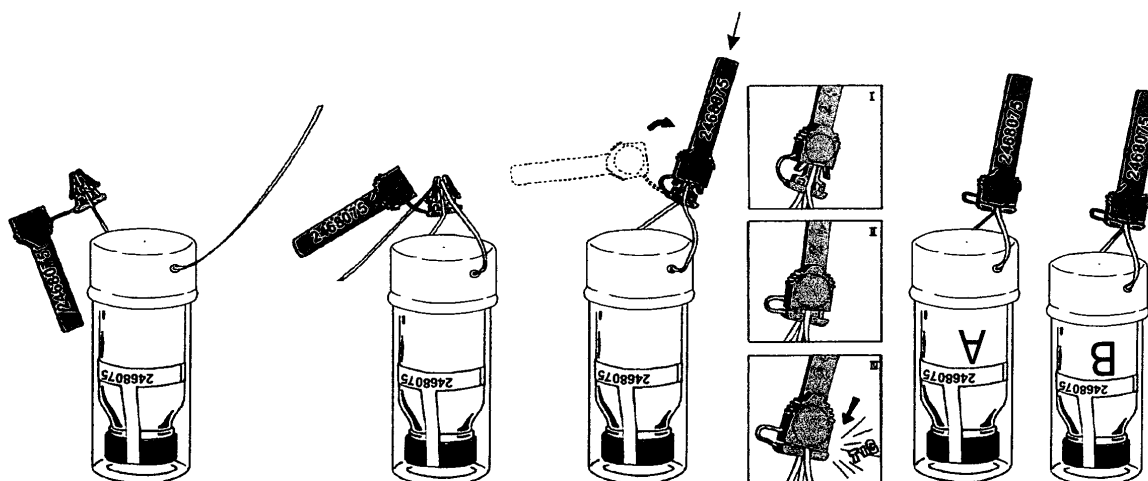
1.2- Two glass bottles A+B are sealed with type seals with code numbering (II analyses).



Before seals are applied make sure that the surface of the glass bottles is dry and clean.

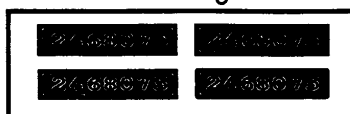


2 - Max security seals TIK manufactured in Polycarbonate, orange color, having high relief random numbering which doesn't line up. TIK seals are used to seal plastic capsules which contain reversed glass bottles (I analysis A and II analysis B).



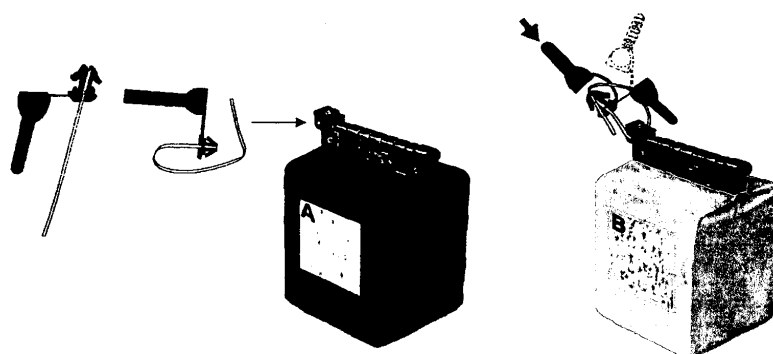
Tav. B

- 3 - Orange adhesive labels with code numbering used to complete documents.

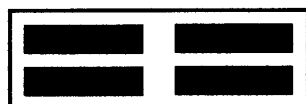


Before starting sealing bags procedure, check the two blue Tik seals and the two blue code numbering labels adhesive are identical.

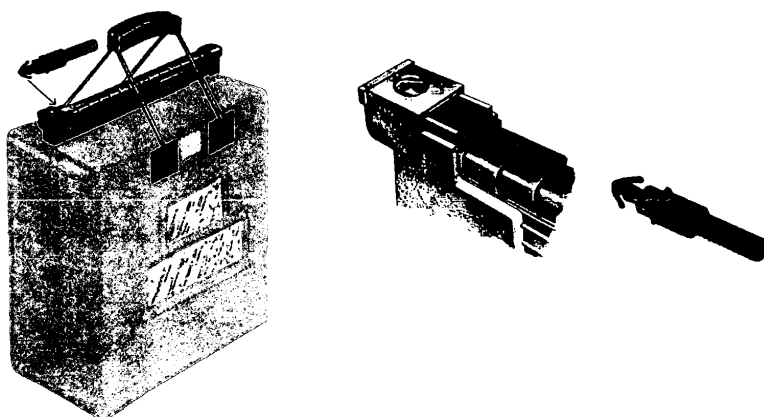
- 4) Max security thermal bags sealing A blue (I analysis) B orange (II analysis). After setting up the capsule into the appropriate thermal bags, seal with blue TIK seal as follows:



- 5) Adhesive labels with blue paper printed code numbering needed to complete document.



- 6) Max security shipment bag sealing after setting up the thermal bags A+B into shipment bag, must seal with high-relief code numbering seal PLIK as shown.





TECHNICAL SCHEDULE A - 1

THE 1° GATHERED LIQUID CONTAINER + VOID SEAL

SECURITY SYSTEM ORGANIC LIQUID TEMPORARY PRESENTATION.



-Screw top graduated urine container.

VOLUME	200 ml
MATERIAL	Polypropilene

-Tape seal manufactured in material typing, breaking down, VOID VOID, pre-cutting, removed sfrido.

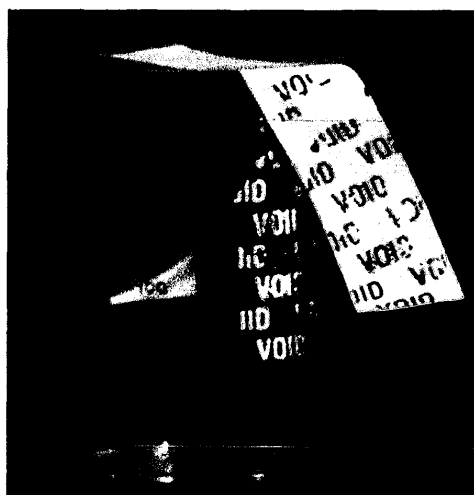
MATERIAL - TYPING POLYESTERE
MEASURES 180 X 20 mm

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Signature

- The break down adhesive seal has to be applied in a uniform way both on the tap and the container of the first analysis.
- The seals must be signed to ensure the origin of the liquid avoiding any possible contest.



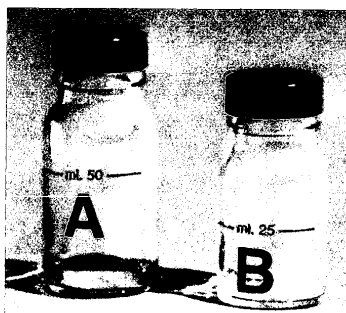
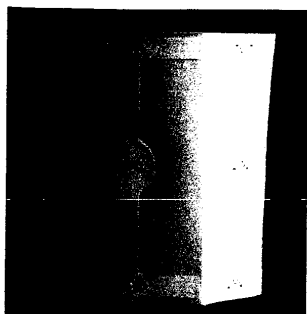
- Once the organic liquid is sealed, the seal will be destroyed. The opening of the container destroys the seal, proving any unlawful attempt.



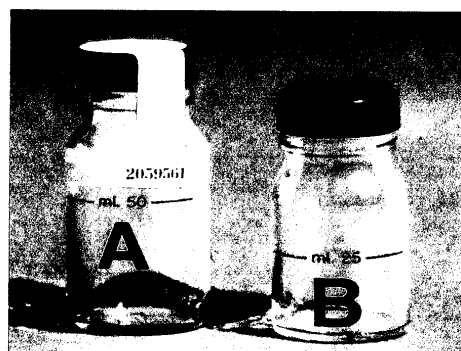
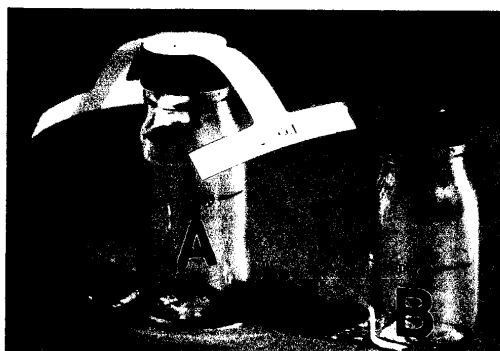
TECHNICAL SCHEDULE A - 2

GLASS BOTTLES + VOID SEAL

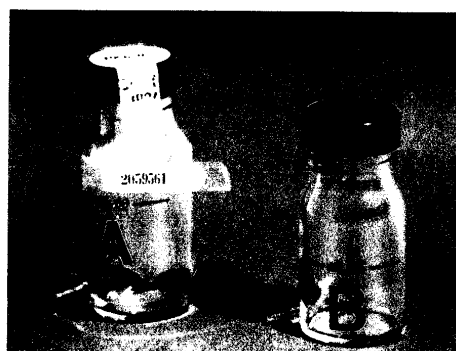
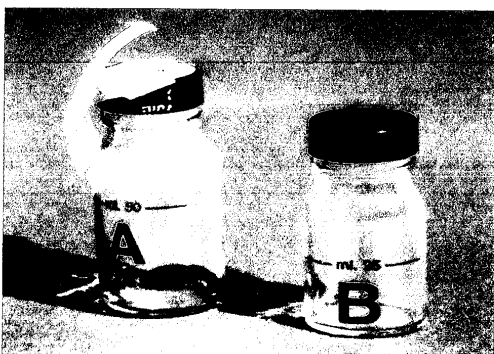
Glass bottles and VOID seals protecting the two samples of organic liquid to be tested. (I and II analyses).



- Tape seals breaking down, VOID VOID, code numbering with repetition on the side, will be applied on the glass bottles tap and on the cylindrical side.
- Glass bottles minimum levels engraved, needed to be tested the I and II analyses.



Tape seals application, breaking down, with code numbering on the two glass bottles containing the organic liquid aliquot to be tested.



To open the two glass bottles you must remove tape seals that will break down leaving traces on both the glass bottles and the sea of fraudulent attempt.



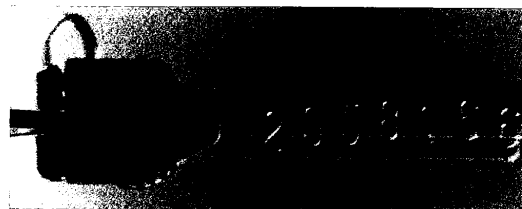
TECHNICAL SCHEDULE A - 3

MAXIMUM SECURITY SYNTETIC RESIN SEAL - TIK

HIGH - RELIEF NUMBERING CODE, SEVEN RANDOM DIGITS WHICH DON'T LINE UP.



Polypropylene Seal

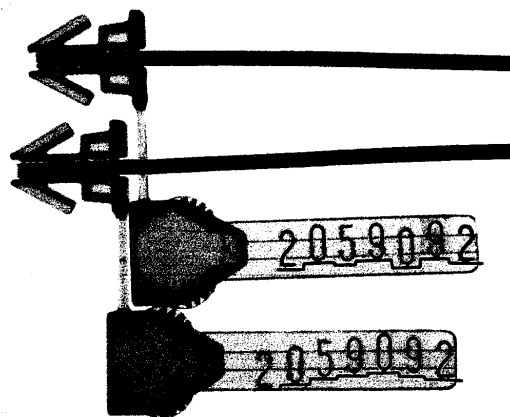
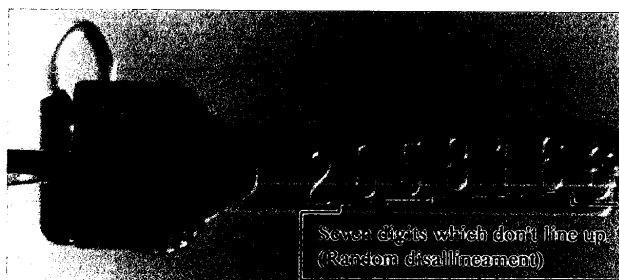


Polycarbonate Seal

Maxim Security seal TIK manufactured to seal plastic capsules thermal security bags and security shipment bags. Seals manufactured by several types of synthetic resin that react in a different way to the fraudulent attacks.



- The TIK seal with high - relief code, seven random digits which don't line up.
- The code numbering, moulded during the manufacturing process, at the moment the fluid mixture is put into the mold. This seal cannot be altered, eliminated or forged.
- The high - relief numbering does not repeat itself. Direct transferring from seal numbering to document eliminates copy errors or alteration risk.



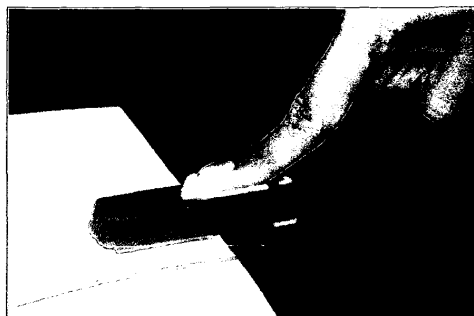
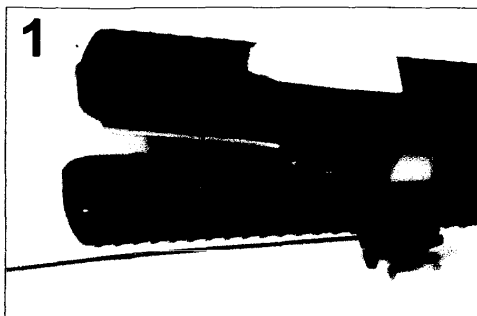
- The seven random digits don't line up. The seal cannot be opened without leaving signs of tampering.

- The high-relief numbering allows you to transfer the numbers directly to documents and ends the tiring task of copying numbers, which would leave a greater margin of error. Prevents document altering, because the high relief numbering is engraved on the documents.

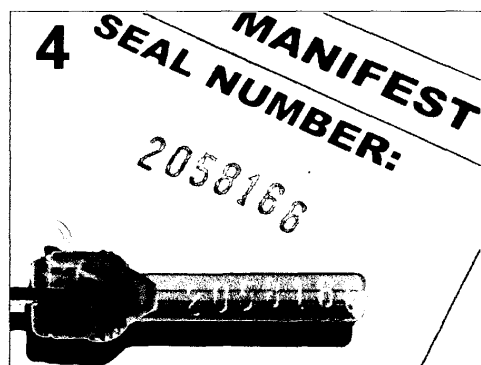
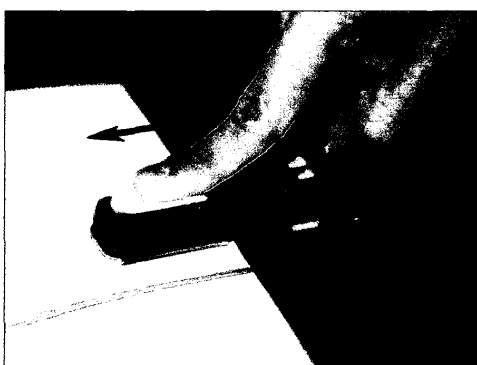


TECHNICAL SCHEDULE A - 4

DIRECT TRANSFERING FROM HIGH - RELIEF NUMBERING TIK CODE SEAL TO DOCUMENT.



It's possible to directly transfer the high - relief numbering code to the documents from the TIK seal (manufactured exclusively by P.P.&C. S.r.l.) with a simple tool (fig. 1-4).



Advantages for security:

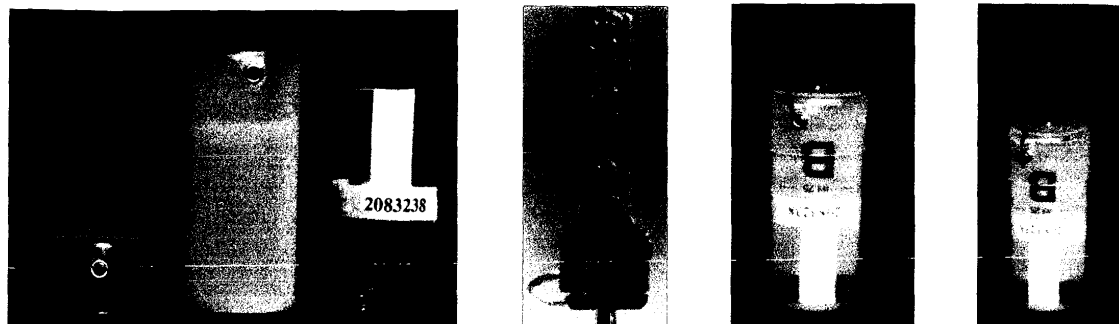
1) prevents document altering, because the high - relief numbering is engraved on the documents as it is at the moment that the fluid mixture is put into the mold. Each and every seal has a different numeric position, seven digits which don't line up, making it impossible to even hypotesize duplication or substitution. This high - relief numbering system is without repetition.

2) Ends the tiring task of copying numbers, which would leave for a greater margin of error.

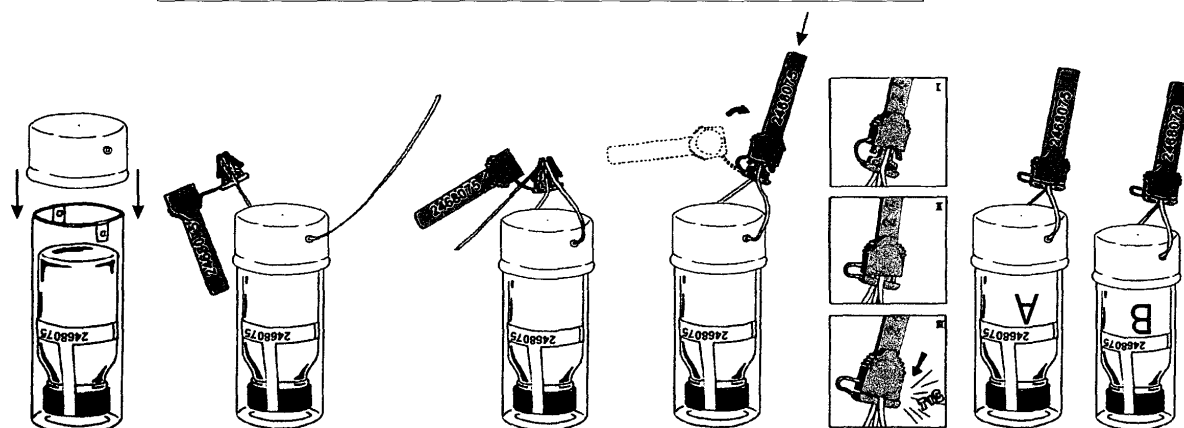


TECHNIQUE SCHEDULE A - 5/a

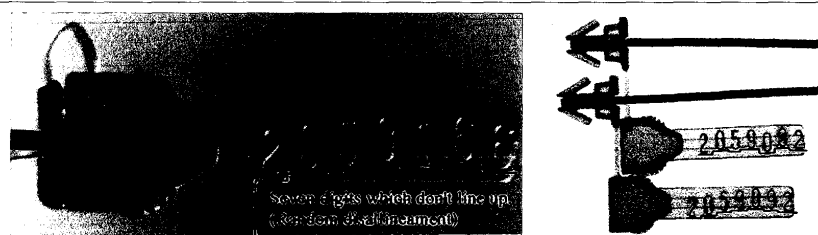
PLASTIC CAPSULES + TIK SEAL



Sealed plastic capsules to protect glass bottles containing the two organic liquid dosages to be tested.



- Reversed glass bottles I and II analyses must be sealed in the plastic capsules avoiding any fraudulent tampering with the organic liquid.



- The plastic capsules must be closed by the maximum security TIK seal with high - relief numbering, manufactured, in synthetic resin.
- The seven digit code is moulded during the manufacturing process, at the moment the fluid mixture is put into the mold. Each and every seal has a different position which doesn't line up, making it impossible to even hypothesize duplication or substitution.