

SIKELIUP

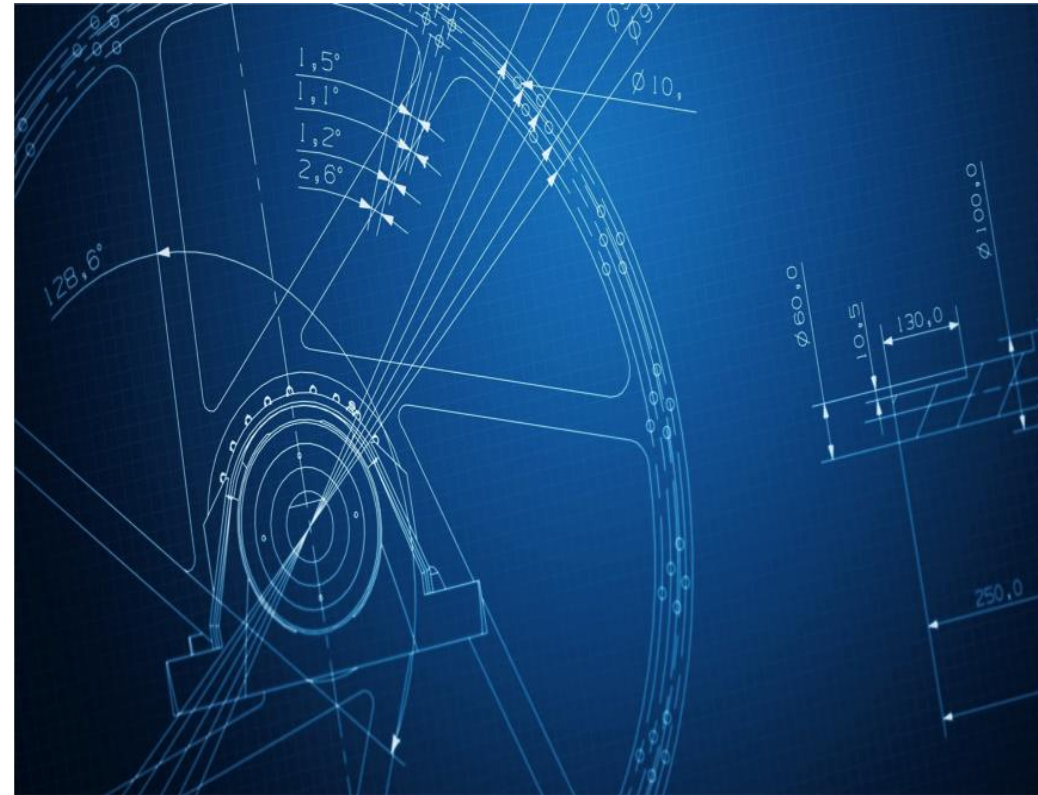


CUAD



SikeliUP srl is an innovative start-up, founded on 2014, by initiative of some researchers at the Department of Physics and Chemistry of Palermo University, Italy

It is essentially an "incubator of ideas" to promote and develop innovative, scientific proposals by young researchers.

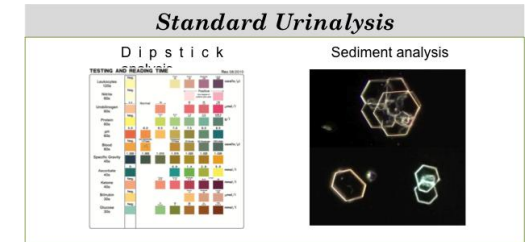


SikeliUP and innovation on urinalysis

An other approach?

State of art of automation on urinalysis:

A BULKY ANALYZER !!



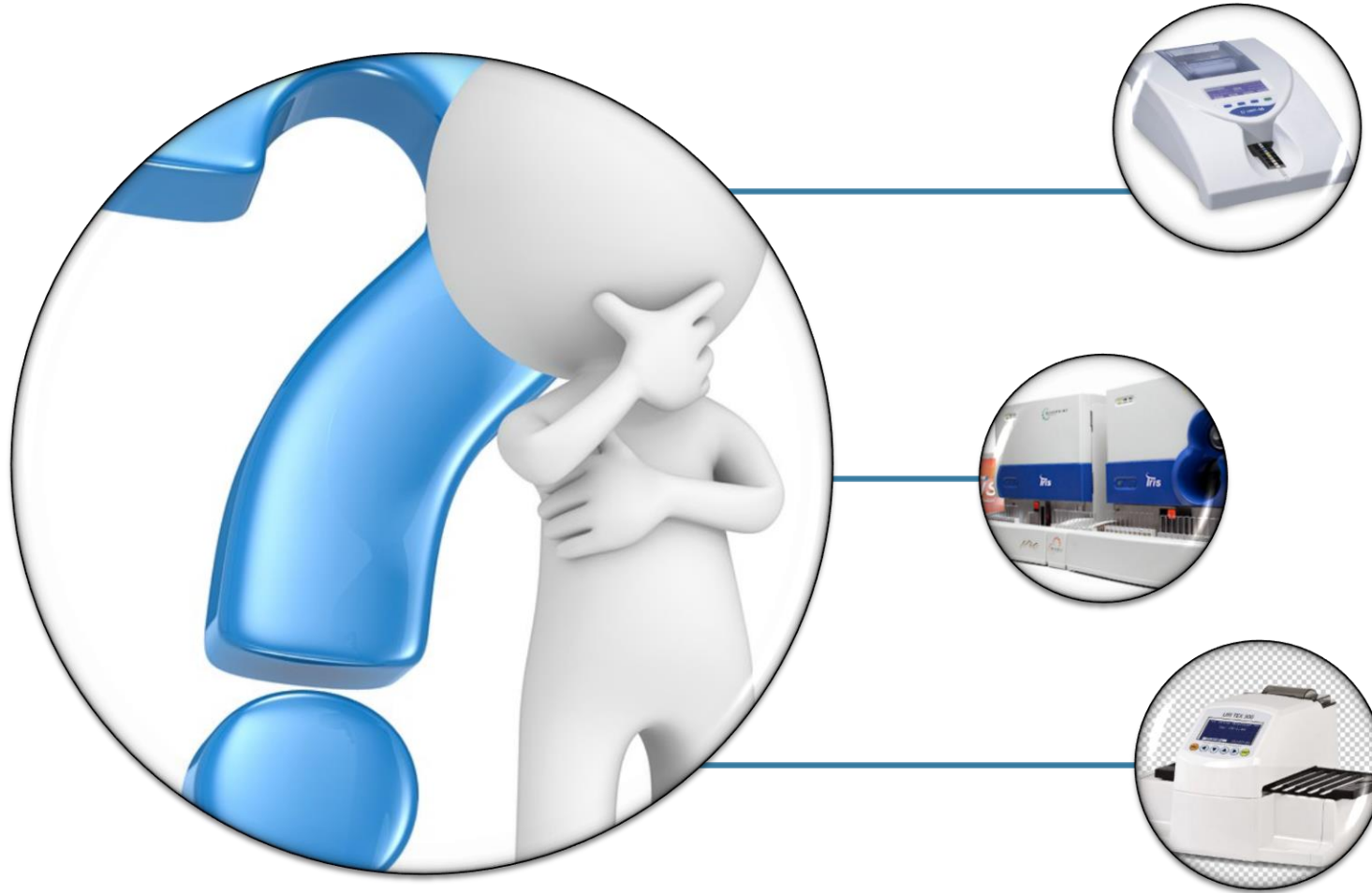
A new and innovative urinalysis autoanalyzer ?

Cost effective, simple and smaller, improving analytical performance and more competitive on Urinalysis market

How is it feasible?



By innovating the standard urinalysis tube



Going towards a *CUAD oriented* autoanalyzer...

A dynamic device

Much more than a tube:
CUAD represents a device where
to build a new autoanalyzer!

C_{omplete}

U_{rine}

A_{nalysis}

D_{evice}

How SikeliUP worked out



The dipstick inside

- ▼ The dipstick is transferred inside the tube: CUAD is going to be a Dynamic device, changing its state during reaction



A membrane with selective permeability

- ▼ Membrane has a one-direction permeability: allows the contact between reactive pads and urine sample, in order to avoid any chemical contamination



A separating septum

- ▼ An aluminum septum is dividing the tube in two separate compartments



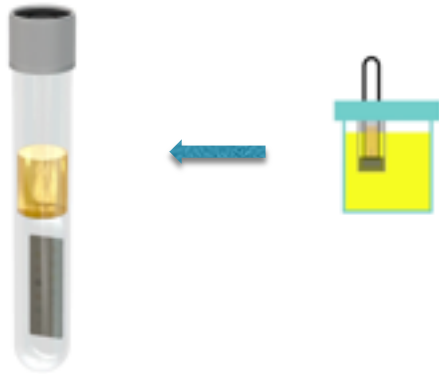
The Collection Chamber

The Reaction Chamber

- ▼ Vacuum is created into the Collection Chamber

No operative changes

▼ Easy filling from the primary container



▼ Easy transport to the laboratory



CUAD is compatible
with all standard sample racks



▼ *Dedicated chemical-physical analyzer is no longer needed,
replaced by one or more LED readers*



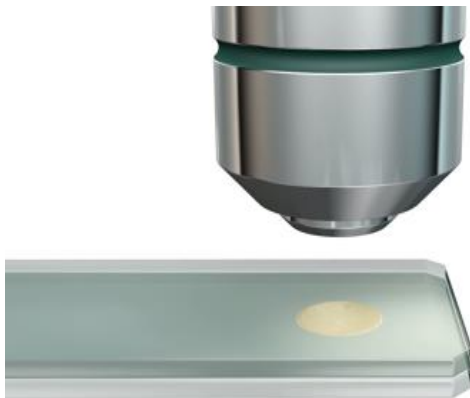
From the collection chamber...



Preliminary sample mixing, in order to dispense native urine for sediment analysis



Urine sample for sediment analysis can be easily stored to be performed after chemical-physical testing



Otherwise, dipstick and sediment analysis can be performed on all the samples, at the same time

... inside the reaction chamber



Needle is piercing the septum



Urine flows down

PADS CHANGE THEIR BASIC COLORS



Urine imbibes the membrane and reactive pads





At the right timing, one or more LED Readers process every single pad: dipstick analysis is performed inside the Device and its reading only is deputed to analyzer

Processing



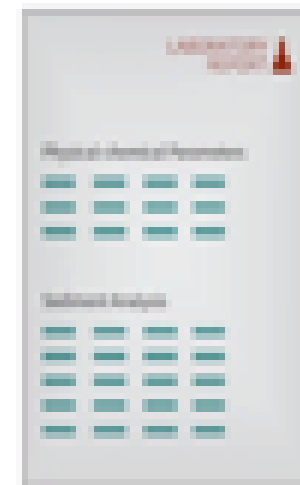


simplicity is coming



- ▼ *Dedicated chemical-physical analyzer is replaced by CUAD: the new device transfers into itself the reaction profile of a dipstick analysis*

NO VARIATION ON LABORATORY REPORT



- ▼ *Sediment analysis is performed by the usual technology*



simplicity is coming



automation
backup
POCT
manual urinalysis



1 Automatic analyzers
CUAD is the only device worldwide able to perform, on automatic analyzers, standard and complete urinalysis, from native urine and in a fully closed mode.

CUAD allows to project and build smaller autoanalyzer than the actual ones, without any loss of performance.

Suitable for high and small throughput analyzer, and backup instrumentation.

2 POCT analyzers
CUAD works in a closed mode, avoiding any *dirty* step on urinalysis and biological contamination.

Suitable to be used on peripheral or spoke labs, hospital wards and pharmacies

3 Manual urinalysis
Since filling from the primary urine container, CUAD remains a closed device during every steps of manual urinalysis.

No biological risks for operators, and simple waste discharging



simplicity is coming



On **February 2017**, it has been granted the
Patent Release for Italy
(Invention n. **102014902269414**)

On **January 2019**, it has been granted the
Patent Release for all European countries
(Patent number **3155421**)

Patent international acknowledgments are currently un-
derway, by all the major regions worldwide
(International application No. **PCT/IB2015/054423**)

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