

Unisensor

State-of-the-art diagnostic kits for the dairy value chain

Founded in 1997 to exploit five patents, Unisensor now employs 75 people and has an annual turnover of €15 million. Its expertise enables it to guarantee optimal quality products that comply with European standards and the expectations of consumers.

Bringing the most adapted technology to the end user: this is Unisensor's ambition. The company is keen to offer appropriate solutions to each actor in the milk value chain: farmers, transporters, dairies, and analysis laboratories. For farmers, Unisensor has a very easy-to-use antibiotic diagnostic kit: "DipSensor". This rapid test consists of an innovative milk sampling tube, that takes the exact amount of sample with one move, no need for a pipette. And that's not all: the test strip already contains all needed reagents. In other words, a tube and a test are sufficient to obtain a result within 10 minutes at ambient temperature and in absence of any electric power.

For their part, transporters and dairies can rely on the standard test range called "Sensor". These kits consist of two parts: the dipstick on one hand, and the microwells containing the reagents on the other. These can be multiplex tests that can detect several parameters at the same time, especially the various families of antibiotics. This is a very welcome offering, as evidenced by "TwinSensor", which was launched in 2005 and has been a bestseller ever since. The first of its kind, "TwinSensor" can detect simultaneously two families of antibiotics. Since then, new generations of diagnostic kits have been developed that can detect three and even four families of antibiotics. These measurements are essential for dairies, which must comply with very precise European standards in terms of maximum residue limits in milk. This is obvious when you know that antibiotics slow down or even destroy the action of the lactic ferments used to make fermented products from milk. Another Unisensor kit, "Extensor", shows an exceptional performance since it detects 17 families of antibiotics but also various toxins and adulterants such as melamin. This performance can be explained by the technology used: detection by fluorescence



versus detection by gold nanoparticles for the other tests. The very high sensitivity of this technology allows very low detection thresholds and results are known in only 13 minutes.

Analytical laboratories are just as keen on Unisensor's solutions. Their automated platform named "Beadyplex" is based on flow cytometry, which allows fluorescent particles to be excited to detect simultaneously ten families of antibiotics from a large variety of matrices such as milk, seafood, cereals, etc. A hundred samples can thus be analyzed at once within an hour and a half.

As a privileged partner of the main owners of dairies (Nestlé, Lactalis, Danone...), Unisensor intends to continue working on the milk value chain. The company wants to go as far up the value chain as possible, as close to the farmer as possible, as close to the field as possible. New diagnostic test platforms are being developed for the production of rapid and user-friendly tests. Unisensor is banking on the exploitation of its know-how in gold nanoparticles: know-how that is exploited by Nano Flow, a recently created spin-off to market gold nanoparticles to other producers of rapid diagnostic tests.

Thanks to this expansion of its activity, Unisensor plans to double its turnover over five years and to open up new markets.

DipSensor®
Manage antibiotic risk in milk with confidence

BETA-LACTAMS
TETRACYCLINES
CEFALEXIN



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