

**Improving animal health and welfare by on-line SCC monitoring instrument 'LUCI'***Elnaz Khatami**Mastiline, the Netherlands; [e.khatami@mastiline.com](mailto:e.khatami@mastiline.com)*

Healthy cows are essential for a dairy farm. A healthy cow produces more and better quality milk and uses less medicine, like antibiotics. One of the most obvious health indicators for dairy cows is the somatic cell count (SCC) in milk. High numbers will lead to mastitis, which is an inflammation of the udder and negatively affects the health of the cow and consequently the production of milk. Mastiline has developed a detection system for early stage monitoring of cell count for each individual cow. With a detection limit of 50K cells/ml it has outstanding performance compared to other technology in the market. The aim is to improve animal health to reduce the overall cell count of a herd, to increase milk production and to reduce costs. Research has shown that cows with lower SCC produce more and better milk. Estimation of WUR research indicates a revenue potential of 82 – 220 (€/cow/year). Mastiline has developed an analytical instrument (sensor) named LUCI for automated on-line monitoring of somatic cell count (SCC) which can be easily integrated in the automatic milking system (AMS). The measuring instrument consists a sampling unit, reaction chamber and detection module. The method is based on ATP analysis. The ATP method is scientifically proven to have good correlation with the gold standard. Milk samples are tested with LUCI and compared with the Fossomatic results, which currently remains the gold standard in somatic cell counting.