

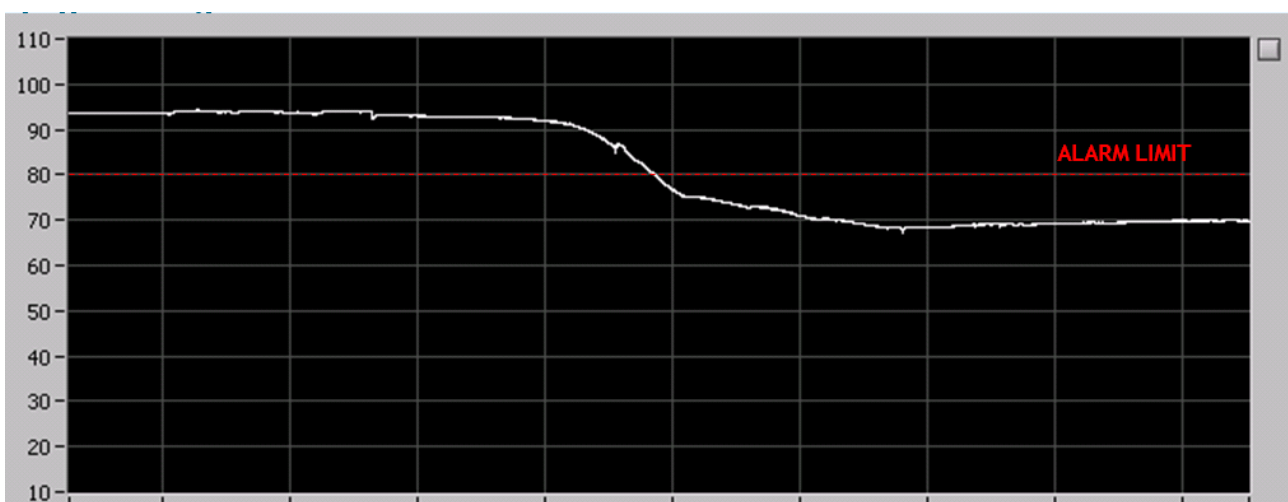
DATA SHEET

LEW-100A

Liqum Early Warning leak detection system for tanks containing alkaline liquids

Liqum's LEW-100A Early Warning leak detection tool for alkaline conditions is based on worldwide-patented electrochemical multiprobe sensor technology, intelligent information processing, and an Internet and text message alarm service.

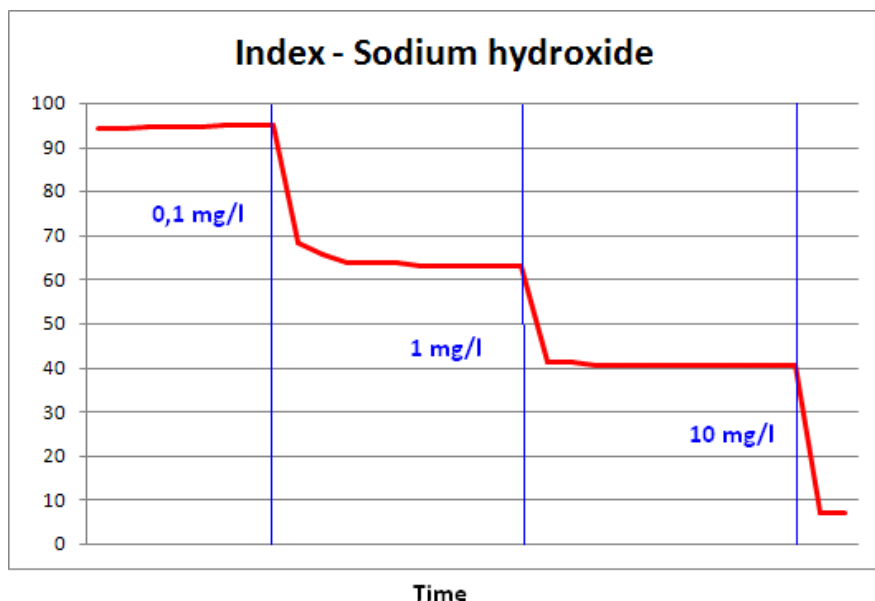
The LEW-100A is very sensitive to sodium hydroxide. The sensor data is processed in the LEW-100A information unit, where a neural calculation network produces a soil chemistry index, which is up-dated constantly and in real time on the user interface, accessed via a secure Internet connection. Hydrogen and carbon chemistry are taken into account in the data processing. If sodium hydroxide leaks into the ground, the sensor detects the chemical changes in the soil and, if appropriate, an alarm is transmitted by SMS (text message) and e-mail. These alarms can also be made visible in Savcor Electrochemical Antiscaling System user interface.



LEW-100A soil chemistry index and alarm-trigger level for sodium hydroxide leaks

Limits of detection for sulfur compounds

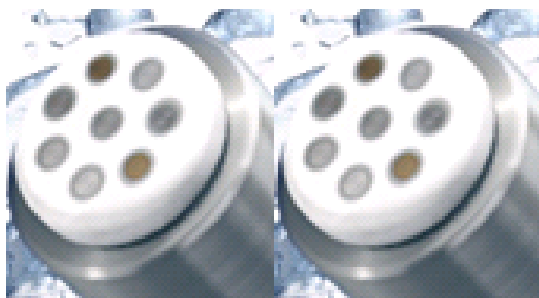
- Sodium hydroxide <0,1 mg/l – 100 mg/l



Sensitivity to Sodium hydroxide

The sensor consists of several different electrodes which are sensitive to many ions. The monitoring principle is based on measuring oxidation and reduction as well as more complex reactions on the surfaces of the electrodes.

- working electrodes: selected according to clients' required solutions
- reference electrode: metal electrode or standard electrode



Liqum Early Warning sensor technology based on electrochemistry

The LEW-100A information unit houses the measurement electronics, communication technology and the GSM mobile technology which allows the data to be transferred to the Liqum Early Warning Service.

LEW-100A information unit features

- measurement range: -2400mV – +2400 mV
- resolution: 2 μ V
- measuring interval: 1 minute in standard set-up; adjustable
- temperature range: -40°C – +85°C
- wireless data transfer: gsm modem



The Liqum Early Warning system transmits leak alarms to the end user by e-mail and text message: The LEW-100A stand-alone unit monitors 24/7 and transfers data wirelessly to the hub unit, which can be located up to 300 meters away. The hub forwards the data instantly via an ethernet or gsm connection to the Liqum Early Warning Service. The result is that the user screen is continually updated in real time.

Early Warning leakage detection complements Savcor's asset management package and provides the user with easy access to relevant information on the status of the monitored structure.