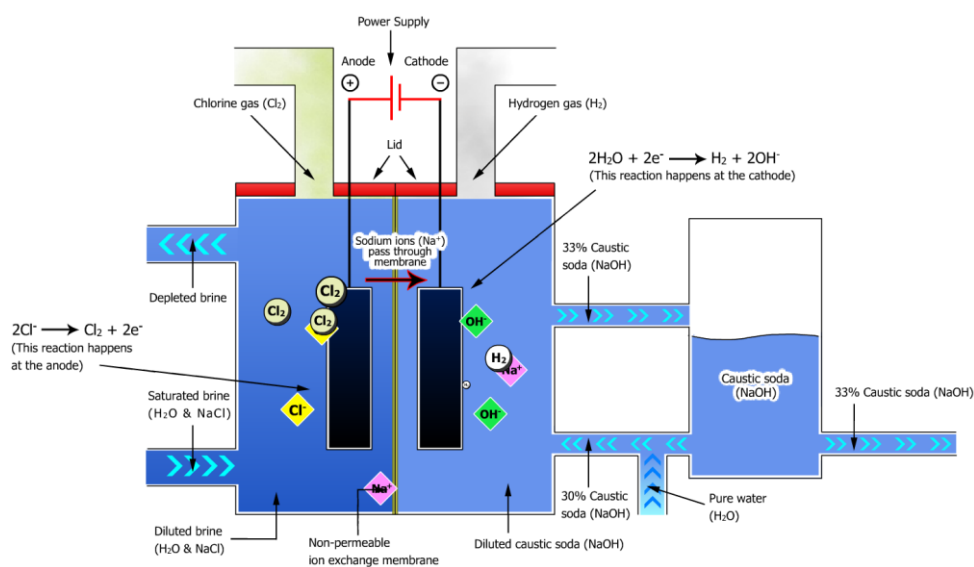


## Chlor-alkali industry: Analysis of Calcium, Magnesium in Brine

Chlorine is produced from salt with three different technologies. The membrane technology now accounts for 51.2% followed by the mercury process (31.8%) and the diaphragm process (14%). The shift towards membrane technology is in line with Euro Chlor's voluntary agreement to phase out the installed mercury capacity by 2020. In the membrane electrolysis production of chlorine the purity of the brine is very important. The presence of impurities such as calcium and magnesium can shorten the performance & lifetime of the membranes or can damage the electrodes. Partial membrane blockage will lead to high electrical operational costs and the high cost associated with replacing membranes. The Process Analyzers will monitor the total hardness concentration and send out a trigger when there is a breakthrough of the ion exchanger.



Source [www.eurochlor.org](http://www.eurochlor.org)

### Application:

The Process Analyzers can be used in several stages of the process. For high feed concentrations of calcium/magnesium to very low concentrations in the ultra-purified brine. The method is based on photometric determination using a standardised method.

### Typical Range:

0 – 20 µg/L Ca<sup>2+</sup>

### Remarks:

Other applications are available for the Chlor-alkali industry like: acidity, carbonate, hydroxide, silica, alumina, ammonia, iodate and chlorine.