

# Caustic/Carbonate Process Analyzer

## From Metrohm Process Analytics

Hydroxide (also known as caustic soda, lye, or  $\text{OH}^-$ ) is often analyzed in combination with carbonate ( $\text{CO}_3^{2-}$ ). Due to the absorption of carbon dioxide in basic solutions ( $\text{pH} > 7$ ), various levels of carbonate are present in nearly any caustic mixture. As  $\text{OH}^-$  is often used as a scrubbing solution in different production facilities, it is of interest how much  $\text{CO}_3^{2-}$  is absorbed. A simple pH measurement is not enough – only titration provides sufficient details about the levels of both  $\text{OH}^-$  and  $\text{CO}_3^{2-}$  in the solution to take any necessary steps to increase scrubbing efficiency for example.

Because of its role in many different (production) processes, it is of vital importance to closely monitor the concentration. The **2026 Caustic / Carbonate process analyzer** from Metrohm Process Analytics is the most straightforward and easy-to-use tool to do so online.

### About the Caustic application

The analysis of  $\text{OH}^-$  with  $\text{CO}_3^{2-}$  is well known as the **P & M number**. The detection is performed with a Metrohm pH electrode. The analyzer is able to handle a wide range of caustic and carbonate concentrations, from **mg/L to %**.

## Benefits for online analysis

- Protect expensive company assets by monitoring your processes
- Process data available at your fingertips 24/7 means no waiting for slow, manual laboratory methods
- Increased safety for employees – no manual sampling necessary, no exposure to caustic environments
- Save money by reducing downtime: analyzer sends alarms for out-of-specification values which inform the operator sooner

## $\text{OH}^- / \text{CO}_3^{2-}$ analysis performed safely online

- Caustic and carbonate can be measured in 1 or 2 sample streams
- Compact footprint for tight industrial spaces: 326 x 273 mm
- Safe, rugged enclosure designed to IP66 specifications is ideal for process environments
- A 7" full color touchscreen shows trend graphs and allows action modifications
- Remote access and control via Ethernet and Modbus TCP/IP, with USB for data export
- Easy maintenance due to simplicity of the layout
- Automatic data and/or alarm transfer to a DCS system



## Applications for $\text{OH}^- / \text{CO}_3^{2-}$

- ... in soda ash production / (chemical)
- ... in preparation cooling water / (energy/power)
- ... in chlor-alkali production / (chemical)
- ... in water recovery process / (petrochemical)
- ... in spring water / (drinking water)
- ... in textile cleaning solutions / (textile)
- ... in carbonate scrubber / (chemical)



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