



## Product Information

### Potassium hydroxide SigmaUltra

Product Number **P 5958**  
Store at Room Temperature

#### Product Description

Molecular Formula: KOH  
Molecular Weight: 56.11  
CAS Number: 1310-58-3  
Melting point: 360 °C, 380 °C (anhydrous)<sup>1</sup>

This product is in the form of pellets. Trace elemental analyses have been performed on the SigmaUltra potassium hydroxide. The Certificate of Analysis provides lot-specific results. SigmaUltra potassium hydroxide is for applications which require tight control of elemental content.

Potassium hydroxide (KOH) is a caustic reagent that is widely used to neutralize acids and prepare potassium salts of reagents. It is used in a variety of large-scale applications, such as the manufacture of soap, the mercerizing of cotton, electroplating, photoengraving, and lithography.<sup>1</sup>

Potassium hydroxide is used in the analysis of bone and cartilage samples by histology.<sup>2,3</sup> A protocol for the amplification of DNA from single cells by PCR that incorporates KOH has been reported.<sup>4</sup> The use of KOH in studies of the binding of intercalating anti-cancer drugs to nucleic acids has been investigated.<sup>5</sup>

#### Precautions and Disclaimer

For Laboratory Use Only. Not for drug, household or other uses.

#### Preparation Instructions

This product is soluble in water (100 mg/ml), yielding a clear, colorless solution. Potassium hydroxide is also soluble in alcohol (1 part in 3) and glycerol (1 part in 2.5). The dissolution of potassium hydroxide in water or alcohol is a highly exothermic (heat-producing) process.<sup>1</sup>

#### Storage/Stability

Potassium hydroxide rapidly absorbs carbon dioxide and water from the air and deliquesces.<sup>1</sup> Potassium hydroxide solutions should be stored in plastic bottles (polyethylene or polypropylene). KOH solutions will etch glass over a period of just a few days.

#### References

1. The Merck Index, 12th ed., Entry# 7806.
2. Philip, N. S., and Green, D. M., Recovery and enhancement of faded cleared and double stained specimens. *Biotech. Histochem.*, **75(4)**, 193-196 (2000).
3. Miller, D. M., and Tarpley, J., An automated double staining procedure for bone and cartilage. *Biotech. Histochem.*, **71(2)**, 79-83 (1996).
4. Pierce, K. E., et al., QuantiLyse: reliable DNA amplification from single cells. *BioTechniques*, **32(5)**, 1106-1111 (2002).
5. Cummings, J., et al., Determination of covalent binding to intact DNA, RNA, and oligonucleotides by intercalating anticancer drugs using high-performance liquid chromatography. Studies with doxorubicin and NADPH cytochrome P-450 reductase. *Anal. Biochem.*, **194(1)**, 146-155 (1991).

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