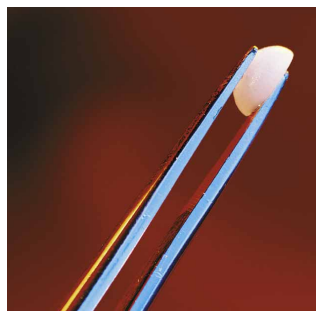


# CHEMICALLY PURE ALKALI APPLICATIONS

Products such as Sodium- and Potassium Hydroxide are used in a variety of applications. Eka Chemicals is an important supplier of Chemically Pure Alkali to the Pharmaceutical and Cosmetic industry as well as to the Electronic and Food industry. Laboratories worldwide are also using our welldefined Alkali for analytical purposes.



## Requirements

There are different purity requirements of which some are standardized, such as the

Pharmacopeias. Others are specifically developed for an application as well as for a certain customer.

The quality requirements also differs where in the process the Alkali is used or for what purpose.

In some applications the physical form – Pellets – is important such as for absorption/clearing of gases. The pellet form is also an advantage in handling of the product (free flowing, reduced dusting and caking.)

## Qualities

Eka Chemicals produce a variety of qualities such as Pharmacopeias of which the most important are USP/NF and EP, Official standards like ACS and FCC and Eka standards with names like Puriss and Purum. However, today Eka Chemicals is more focusing on production of "tailor-made" qualities in close cooperation with the customers.

## Functions of Eka Pellets



### PH-adjustment and neutralisation

This is the most common application for these products.

### Electrolyte

A solution of Alkali and especially of Potassium Hydroxide is an excellent electrolyte (a transporter of electricity). This electrolyte is used in alkali containing Batteries both disposable (primary) and rechargeables (secondary).

Alkali solutions are also used in electrolyzers which produces hydrogen gas. Hydrogen gas is then used in applications such as fat hardening, protective atmosphere to prevent oxidation in the metal industry and in plants for production of Hydrogen peroxide.

### Reactant

Alkali is included in a lot of reactions for producing Sodium- or Potassium containing chemicals. Alkali is also used in saponification of fats as well as catalyzing reactions such as deesterifications.

### Etching

In the electronic industry Potassium Hydroxide is used both as an etching agent for silicon wafers and also as a stripping/dissolving agent for

positiv photoresist (UV-sensitive polymer).

### Mineral donor

In some products there is a need of a well defined content of Potassium. Potassium Hydroxide is an excellent source because it doesn't add anything else besides potassium and water when neutralized.

Some pharmaceuticals has side effects that gives a loss of Potassium which has to be compensated for in one way or another. The reason for the Potassium demand is that the balance between Potassium and Sodium is essential for the function of the human body.

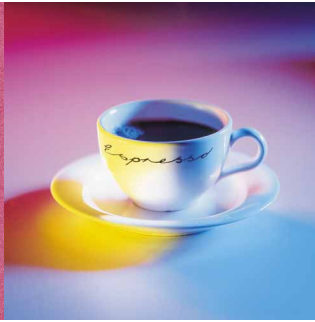
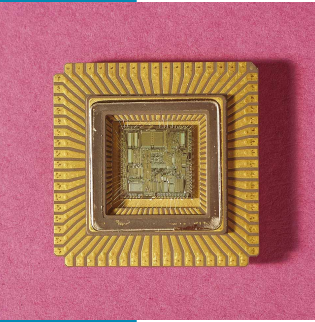
SODIUM HYDROXIDE AND POTASSIUM HYDROXIDE

### Specific cleaning agent

Degreasing of metals used for electronic or electrical equipments. In most cases Potassium Hydroxide is used because sodium is regarded as a poison.

### Absorbent

The pellet form can be used as an absorbent when cleaning gases from carbon dioxide, hydrogen sulphide, humidity and acidic gases such as Hydrogen chloride etc.



## Application of Eka Pellets

### PHARMACEUTICAL AND CHEMICAL INDUSTRY

- Pharmaceutical and Cosmetic Production (Synthesis, Saponification, Cleaning and pH-adjustment)
- Fine and laboratory chemicals (Synthesis and Analyses)

### ELECTRONICS INDUSTRY

- Chips, Photoresists, Semiconductors and PCB (Production and Stripping of photoresists and Etching of metallic silicone)

### FOOD INDUSTRY

- Dry Milk Products (Whey powder, Coffee creamers and Food thickeners)
- Emulsifiers (Mono and diglycerides and Alginates)
- Instant Coffee (Cleaning of production equipment and pH-adjustment)
- Instant Tea (pH-adjustment)
- Edible oil (Hydrogen gas production for fat hardening)

### BATTERIES AND ELECTROLYSERS

- Batteries (Electrolyte for both disposables and rechargeables)
- Hydrogen gas production (Electrolyte for electrolyzers)

### MISCELLANEOUS INDUSTRIES

- Plastic manufacture (Saponification of dispersing agents, pH-adjustment, Reactivation of catalyst)
- Ethoxylation (Catalyst)
- Gas cleaning (Absorbent of carbon dioxide, hydrogen sulphide, humidity and acidic gases)
- Surface treatment of metals (Degreasing and Cleaning)
- Electroplating bath (Alkaline baths)
- Mirror manufacture (Silverplating bath)
- Photo (Emulsion production and Developer bath)
- Nuclear Power Stations (Storage of nuclear fuel and Regeneration of anion exchangers)

*Please feel free to contact us if you want more detailed information about the applications of our Chemically Pure Alkali.*