pNa

Did You Ever Wish You Knew Exactly When to Change Your Resin? Let Us Show You How with the **pNa** ...

The newly redesigned **pNa** is an easy-to-use and inexpensive instrument for determining water hardness/softness. The hardness of water is due to the presence of magnesium and calcium. These make washing difficult, waste soap and create unpleasant scum and scales. With a zeolite system the calcium and magnesium ions are substituted on a one-to-one basis with sodium ions from a resin. Once all the sodium ions are exhausted, the resin has to be regenerated. This is currently determined by estimating the volume of water that goes through the softener and *guessing* when to change the resin!

Even though this may work in some cases, it fails in most since the sodium content of feed water is *never* constant. As a result, either the resin is regenerated too early, waste of resources, or too late, causing damage due to scaling. With the **pNa** you can measure the sodium content of feed water and exit water in seconds. When the resin is exhausted of sodium, there will be no exchange and the **pNa** will read the same value at the two ends. Only then the resin should be changed. **pNa** takes guess work out of resin regeneration!

Now the **pNa** tester comes with a new ergonomic casing. The new case is much more rugged, better fits your hand and also features a much larger LCD.

How zeolite resin works

The softening process removes excess hardness by using a zeolite medium. The most common form is sodium zeolite, with the Na_2Z symbol. Typical sodium zeolite actions on hardwater are:

$$CaSO_4 + Na_2Z \rightarrow Na_2SO_4 + CaZ$$

$$Mg(HCO_3)_2 + Na_2Z \rightarrow 2NaHCO_3 + MgZ$$

Hard water flows into a zeolite bed and emerges as soft water. There is no precipitation, no reduction of TDS but a loss of sodium and gain of calcium by the zeolite. When the softening capacity is exhausted, the zeolite must be regenerated with brine or magnesium. In addition to being a regulated ion in wastewater, sodium concentrations must be monitored in food storage and production operations and for ecological studies. The **pNa** tester is a fast and economical way to check this critical parameter in these applications, too.

SPECIFICATIONS

	pNa
RANGE	0.0 to 3.0 pNa (23 to 0.023 g/L of Na^+)
RESOLUTION	0.1 pNa
ACCURACY (@20°C/68°F)	±0.2 pNa
TYPICAL EMC DEVIATION	±0.1 pNa
CALIBRATION	Manual 1 point through trimmer
BATTERY TYPE / LIFE	4 x 1.4V / **500 hours** approx. continuous use
ENVIRONMENT	0 to 50°C (32 to 122°F); RH 95%
DIMENSIONS	175 x 41 x 23 mm (7.9 x 1.8 x 1")
WEIGHT	78 g (2.7 oz.)

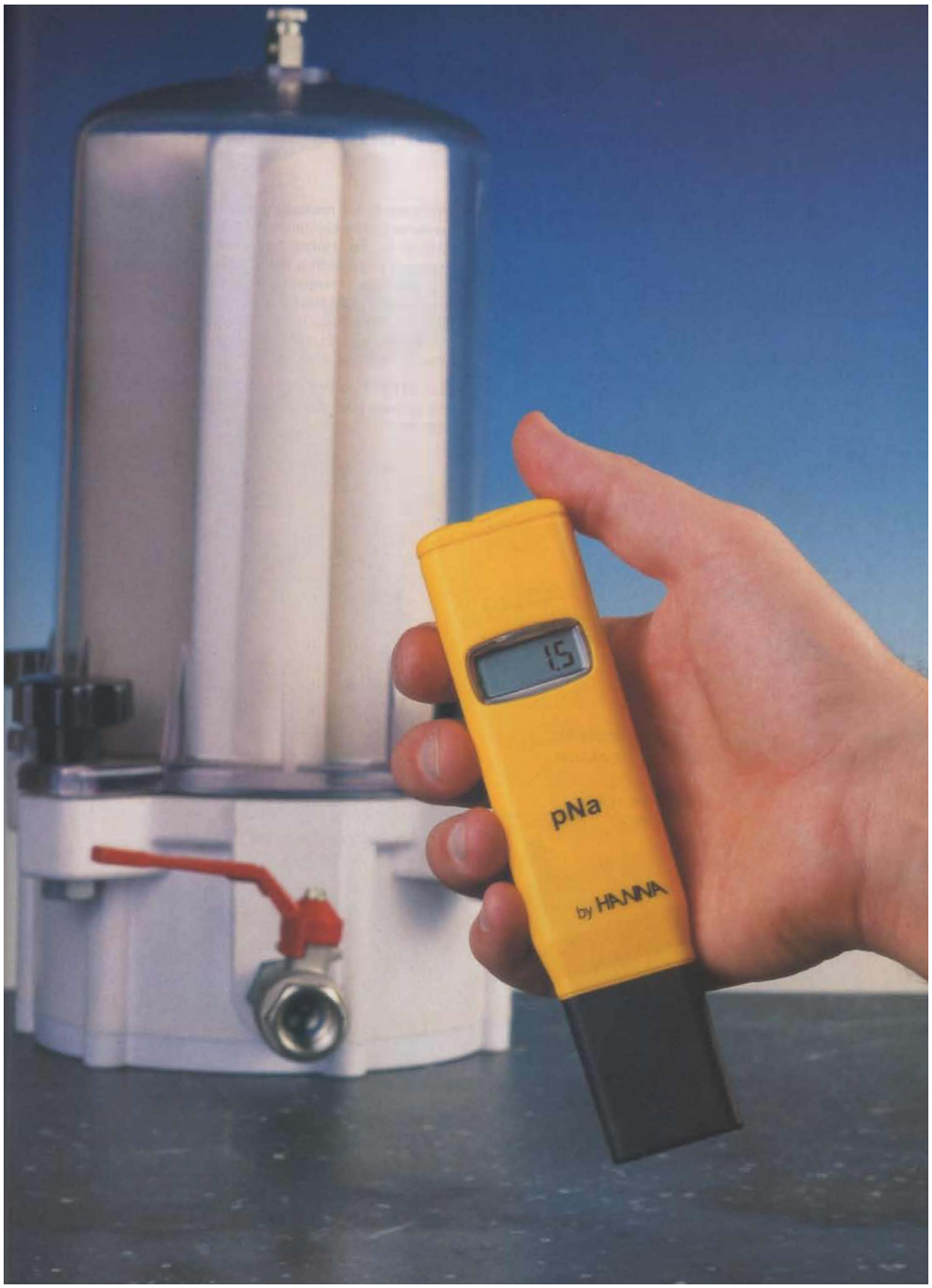
HOW TO ORDER

HI 98202 (pNa) is supplied complete with protective cap, 4 x 1.4V batteries and instructions

ACCESSORIES

HI 73202 Electrode for HI 98202
HI 7080M 2.3 g/L Na solution (230 mL)

For a complete range of calibration and maintenance solutions see pages G11-G12.



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