Test papers

To secure quality process parameters such as pH-value, hardness of water, potential of reduction or remains of peroxide have to be monitored intensively. As is it only possible to integrate these parameters in an online process monitoring system with high effort, many companies use quick-reference systems.

Areas of application

Process control is important in nearly every wet process to control process parameter and prevent mistakes such as:

- color deviations
- inequalities
- silikon spots
- chemical impairments
- damage in storage

By the help of the test papers the responsible machine operator can quickly and easily monitor the process and work against it if necessary.

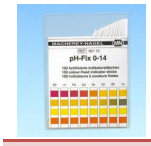
pH-value

The pH value is a measure indicating the acid or alcaline character of a water-based solution. The pH-value is a dimensionless number and is defined as the negative decadic logarithm of H^+-ion-activity.

Picture 1 - pH scale

A simple determination of the pH value takes place through a visual or colorimetrical assessment of the color change through indictor dyes. Evaluation mostly occurs by means of comparable color scales. Thereby either the change of color of a single dye can be used for a relatively narrow area of measuring values or one can use dye mixtures, the so called “universal indicators”.

They show different colors above a wide scale of pH-values. Often fields with different dyes are ordered next to each other in the measuring stripes and each of them has its optimal readability in a different field of value.

pH indicator strips	**Ord.No. ZB-EI001e**
	
test strips	pH-value not bleeding
indicator	4 color indicators
pH area	0 - 14 in pH areas 1-2-3-4-5-6-7-8-9 -10-11-12-13-14
package item	box with 100 pieces

pH paper	**Ord.No. ZB-EI002e**
	
test strips	pH-value not bleeding
indicator	3 color indicators
pH-area	0 - 14 in pH areas 1-2-3-4-5-6-7-8-9 -10-11-12-13-14
package item	paper roll with 5 m

Indanthren-yellow paper

This test paper allows a simple determination of hydrosulfite (Na-dithionite). It is used to determine the end point of the conversion of vat-dyes into the Leukoform.

Vat-paper	Ord.No. ZB-EI003e
	
type	qualitative test strips with indanthren yellow
color reaction	yellow => blue
package item	box with 200 strips 20x70mm

Colorimetric test strips

Remaining peroxid after bleaching is especially disturbing in reactive dying as dyes can be oxidatively destroyed. In case of vat or sulfur dying also the remaining peroxide from pretreatment harms the used reducing agents.

Simple determination of remaining peroxide concentrations in solutions or at the wet product takes place through dipping the test stripes and reading out at a colored scale after 15 seconds of waiting time.

Remaining peroxide	Ord.No. ZB-EI004e
	
type	Half quantitatve test strips at peroxide until 1000mg/l H_2O_2 in solutions
color reaction	white => brown
areas	0-50-150-300-500-800-1000mg/l H_2O_2 + warning field
packaging item	box with 100 pieces

Water hardness

Carbonate hardness is a measure for the buffering capacity of water. At high carbonate rate the pH-value of water is only little affected by the addition of acid or alkali. Strong fluctuations of pH value can be reliably avoided in this way. Carbonate hardness corresponds to the total hardness that can lead to the formation of boiler scale. The concentrations of hydrogen carbonate ions resp. the equivalent part of earthalkali metal ions is usually described as carbonate hardness or temporary hardness.

Carbonate hardness	Ord.No. ZB-EI005e
	
type	half quantitative test strips
color reaction	light => blue
area	0-3-6-10-15-20°d
package item	box with 100 pieces

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