

A quick test method for formaldehyde



The Formalidimeter offers a fast, efficient, and reliable method for determining the presence of formaldehyde in textile fabrics. The two most commonly used tests as detailed below are both dealt with by the Formalidimeter:

- **FREE FORMALDEHYDE**
corresponds with Jap. Law 112 and EN ISO 14184-1
- **RELEASED FORMALDEHYDE**
corresponds with AATCC Test 112, SHIRLEY II and EN ISO 14184-2

The Formalidimeter test method is approved by Marks & Spencer.

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Targets/goals of Formaldimeter:

- Provides a technique which is very easy to use.
- Delivers results much faster than standard methods.
- Cost per test lower than before.
- Allows an easy Pass/Fail decision for tolerances.

Procedure:

- Extraction:
Formaldehyde on the test fabric is transferred into a solution containing a special reagent by forced desorption in the MORAPEX system. The test reagent is delivered in pre-filled, sealed test tubes. The extraction process takes a few minutes. Parameters and timing are pre-programmed on the MORAPEX machine and depend on the selected method.
- Developing a colored complex:
The solution is conditioned in a special thermo block for 30 min. at a specified temperature of 60°C to form a colored complex. After color development the test liquid has to cool down to room temperature.

- Measuring:

The test liquid is then measured in a specially programmed and calibrated photometer. The color intensity is in proportion to the formaldehyde concentration. The specific fabric weight is entered via keyboard. The application range for fabrics is 100 500 g/m². The result is directly determined and indicated on display.

- Test time:

Total about 40 - 60 min.

Why is formaldehyde found on fabrics?

There are many reasons why textile manufacturing processes leave formaldehyde on the fabric. The main culprits are “wash and wear”, “wrinkle free” and “non-iron” treatments. These processes often use resins which have the ability to “free” quantities of formaldehyde. Also preservatives in chemicals e.g. auxiliaries for coating, printing and finishing can deliver formaldehyde after processing. There is a great demand in textile industry to have common methods and standards to measure residual formaldehyde on fabrics.

Until now there has been no balanced solution to the problem of analyzing free / released formaldehyde in the laboratory, and expressing the result in a meaningful way with respect to health and ecological issues. There are world-wide more than 10 different methods available for analyzing formaldehyde on textiles.

Restrictions:

There are some restrictions on coated fabrics or membrane type fabrics. In general, the commonly accepted limits for rapid tests concerning accuracy and precision have to be taken into account.

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Technical specifications are subject to change without prior notice.