Odor on textiles is created by odor molecules that adhere to the fibers on the textiles. The human nose perceives some odor molecules, such as isovalerian acids, as unpleasant. Unfortunately, some of these odor molecules manage to survive a conventional household wash, causing what is known as permastink.

The fight against permastink – from vinegar to freezing
Proven household remedies such as vinegar or freezing the textiles in question are as ineffective against permastink as conventional antimicrobial solutions. Although proven antimicrobial active ingredients (such as silver ions) reliably inhibit the growth of bacteria and thus odors during physical activity, they are only capable of reducing durable permastink, not preventing it entirely.

To address this problem, suppliers in the sportswear industry have in recent years started to supplement traditional antimicrobial active ingredients with technologies that capture odors in the textiles. This odor neutralization is often accomplished with zeolite and cyclodextrin. But in addition to the desired odor neutralization effect, they also have shortcomings. They are expensive, alter the handling properties because of binders, cause discolorations, and are not very durable.

Several providers are now marketing new versions of odor-neutralizing treatments for textiles which are also based on conventional antimicrobial active ingredients, where the odor-reducing effect comes from added substances like zeolite and aluminum oxide. These minerals draw and reliably adsorb odor molecules.

ODOR MANAGEMENT FOR TEXTILES

We all know the problem: The day comes when the training shirt stinks even before you put it on. The slightly sweet, penetrating odor of sweat is everywhere. Permastink! And as today’s functionalized sportswear is usually made from microfibres, you can only wash them at low temperatures, which worsens the effect. This permastink, which is the unpleasant odor that can’t be washed out of textiles, has become a hot topic for both consumers and brands.
A silicon dioxide-based sponge structure that prevents odor molecules from adhering is an entirely new way of fighting permastink. This method's advantage is that it addresses the root of the problem: Its innovative odor control significantly reduces the adhesion of odor molecules and thereby protects the fiber directly against undesired permastink. Furthermore, the sponge structure's water film draws and neutralizes odor molecules.

The DIN ISO 17299 standard allows four processes for substantiating the reduction rate of defined odor molecules. This standard relates solely to textiles. SANITIZED chose measurement with gas chromatography (GC) in the ISO standard. As an example, when this process is used, declines in isovalerian acids (IVA), a main component of human sweat, are detected and measured. A treated and untreated piece of textile are compared to each other. The differential value determined in this way represents the reduction rate.

SANITIZED uses gas chromatography (GC) for testing

Permastink isn’t inevitable
There are several solutions on the market for getting rid of unpleasant permastink. The most common solutions are a combination of antimicrobial active ingredients with an odor adsorber, and the modification of the fiber surface into an anti-adhesive surface structure.

SOLUTIONS AGAINST PERMASTINK
What does really help? Get an overview on the best technologies: sanitized.com

SANITIZED AG
SANITIZED is a global leader in hygiene function and material protection for textiles, polymers and paints. For over 85 years, the Swiss company has been pioneering innovative, effective, and safe hygiene technologies for textiles, polymers and paints.

Odoractiv10 ensures that odor molecules cannot adhere in textile fibers. In addition, Odoractiv10 adsorbs and neutralizes unpleasant odors even during wearing. Both in the laboratory and in extensive tests with well-known practical partners and sportswear brands, the wash-resistant effectiveness against unpleasant odors and permastink on sports textiles has been proven. Odoractiv10 carries both bluesign® and OEKO-TEX® certifications. The renowned Hohenstein Institute has also awarded the technology with the «Skin Friendly» label. The product complies with all global marketing authorization requirements and is not subject to the European Biocidal Products Regulation (BPR).

We are happy to support you:
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