

Indoor environmental interior that adsorbs and decomposes four major types of odor.

# TRIPLE FRESH®II



Applicable field  
Interior goods (carpets, curtains, wallpaper)  
Interior decorations of automobiles and trains

## Features

- Formaldehyde that causes the sick house syndrome is adsorbed and decomposed by the chemical reaction and the catalytic action.
- Quietly deodorizes four major unpleasant household odors from cigarettes, garbage and other sources 24 hours a day, while restoring its deodorizing effect at the same time.
- Pet odor is adsorbed and decomposed.

## Overview

(Technical principles, actions, etc.)

- TRIPLE FRESH®II consists of a metal salt that utilizes for the catalytic action to perform cycle deodorization and a highly safe nitrogen compound that utilizes chemical reaction to perform initial formaldehyde deodorization.
- When odor causative agents present in the atmosphere come in contact with carpets, curtains, or wallpaper processed with TRIPLE FRESH®II, the carpets, curtains, or wallpaper will deodorize the odor.

## Introductory Track Record

- A large number of tile carpets and roll carpets processed with TRIPLE FRESH®II were delivered to major hotels, office buildings, and commercial facilities.
- A large number of rug mats, one-piece carpets, curtains, and wallpaper processed with TRIPLE FRESH®II were sold for general household use.
- A large number of automobile interior decorative materials, such as seat covers and ceiling materials, processed with TRIPLE FRESH®II were adopted.
- Many Tispa® series home-use deodorizers have been sold as “real deodorizers that deodorize without disguising odors with scent.”

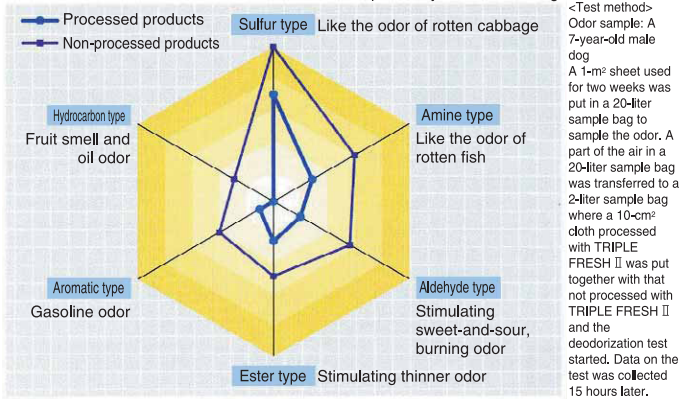
## Effects

- TRIPLE FRESH®II is an environment-friendly deodorant processing technology that deodorize odor without using light or electricity. It decomposes formaldehyde, which is one of the causes of “sick house syndrome,” cigarette smell, pet smell, aging odor and other unpleasant household odors into water, CO<sub>2</sub> and other harmless substances. It keeps deodorizing quietly, 24 hours a day, while restoring its deodorizing effect at the same time.

### Quality Change of Odor (Contribution to Deodorization)

A smell identification device was used to compare the quality of a pet odor with six types of standard smell categories. The result of the comparison test proved that fabric products processed with TRIPLE FRESH II effectively deodorized the pet odor.

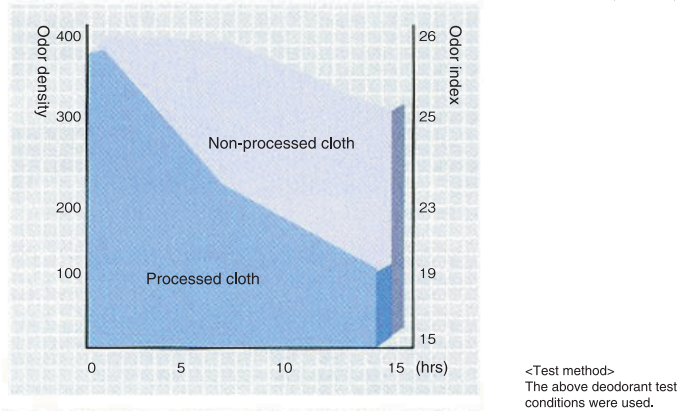
Odor sample: A 7-year-old male dog



Alleviates Pet Odor

### Deodorant Test of Pet Odor (Odor Concentration vs. Odor Index Change)

Various odor will be generated when oils, fats from the bodies of pets are broken down by microorganism. The deodorant effect of TRIPLE FRESH II on the odor was measured with Shimadzu's e-nose system FF-2A, an odor discriminator. As a result, it was confirmed that TRIPLE FRESH II decreased the odor concentration (odor index).



Demonstrated by the Latest Odor Measuring Instrument

ENERGY  
Water  
Energy saving/Energy recovery  
Energy storage/Energy creation  
New energy  
Waste disposal/Recycling/Resource saving  
Air  
Soil  
Other