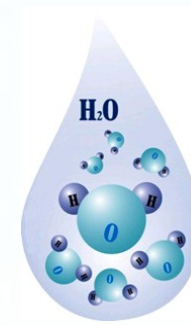


LAUNDRY...



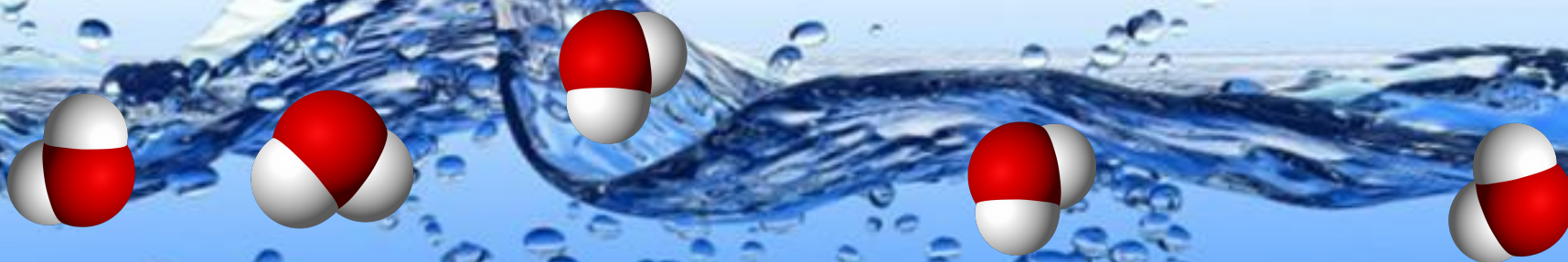
Water: the oldest solvent

Water is the most used solvent and the oldest one.

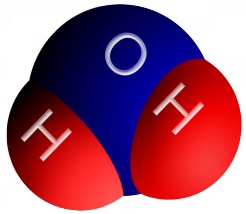


The positive features of water are:

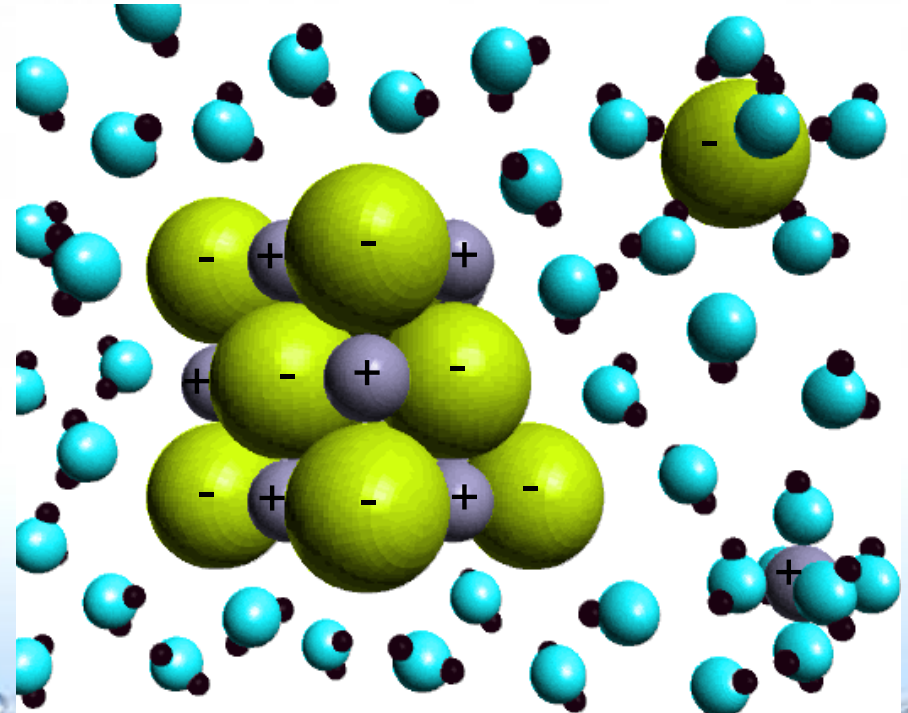
- Safety
- Availability
- Solubilizing properties
- Ecological aspect
- Its use doesn't involve safety rules for the machines
- Easy to use
- Price



Water chemistry



Water is a molecule composed by hydrogen and oxygen. These 2 atoms give to water a light charge. This polarization makes it bind with other charged molecules. For this reason water can dissolve the majority of molecules that have a charge (negative or positive)



Dirty and water

Usually dirty on garments is of fat kind.

Fat molecules are apolar (without charge)

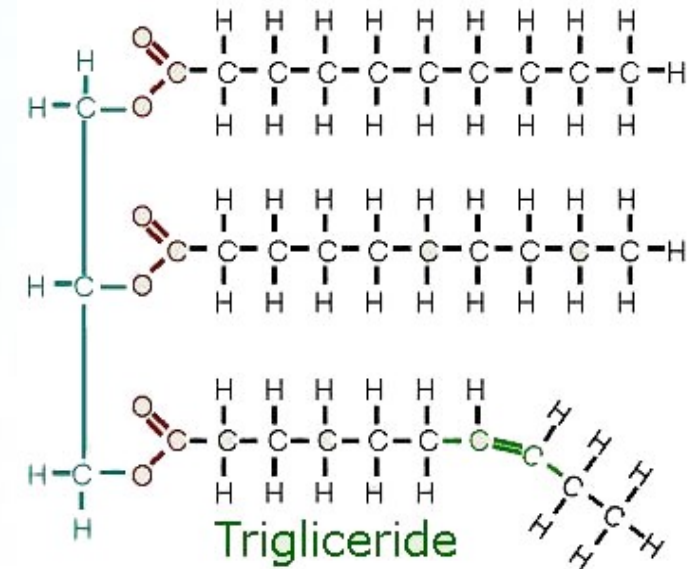
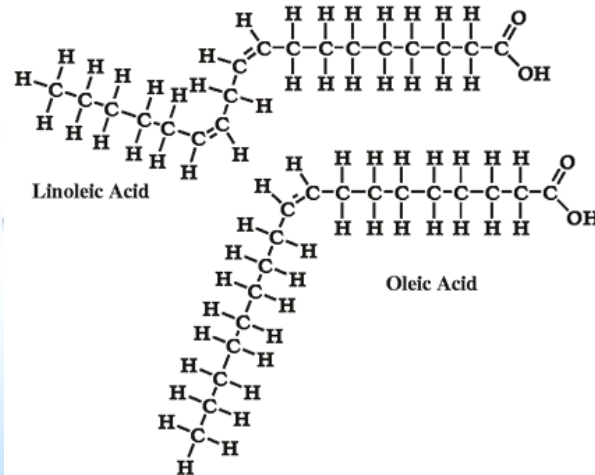
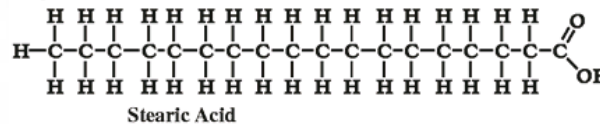


Figure 1. Structures of Fatty Acids

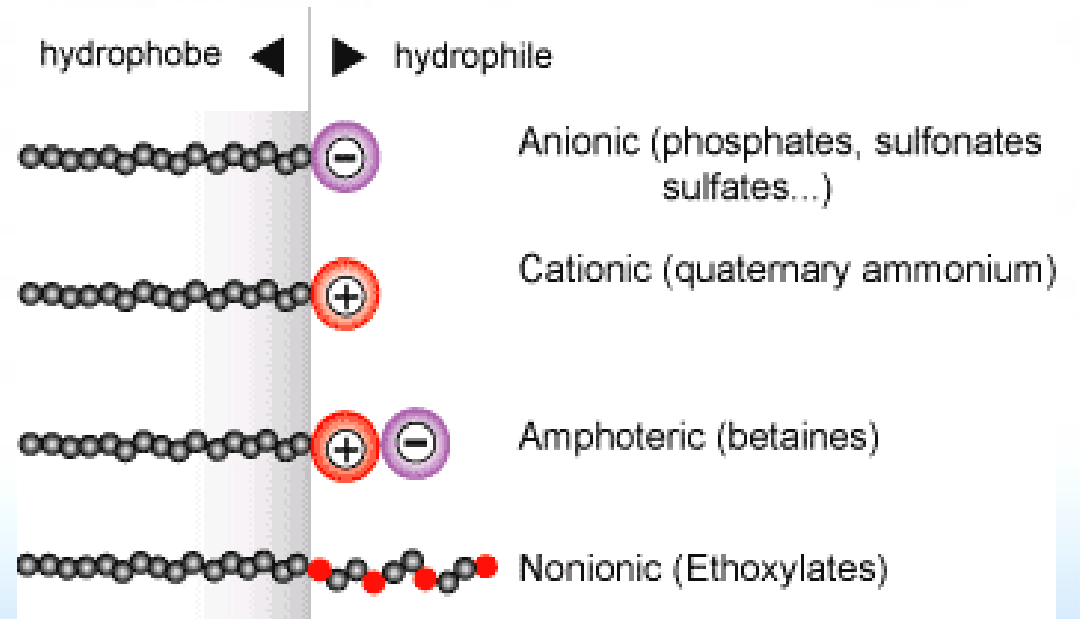


Water is not able to interact appropriately with these molecules and therefore it needs a help.

Surfactants

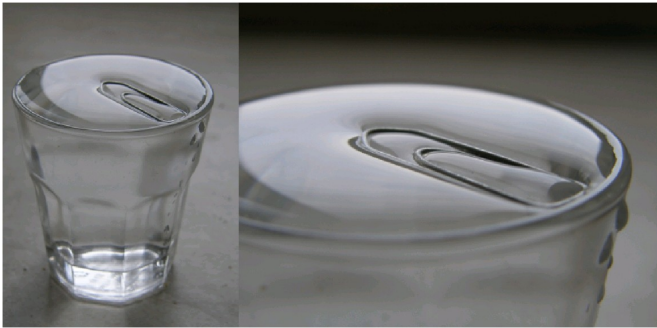
Surfactants are molecules with an apolar part (without charge) and a polar part (with charge).

These two features make them compatible with both water and dirty, so they act as intermediary to solubilize dirt in water.



Surfactants

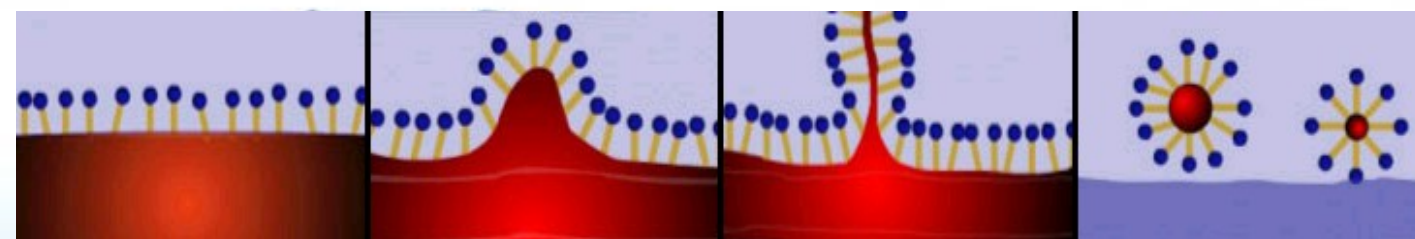
The surfactants property used during wash is the following:



Lower the superficial tension so that water can penetrate into fibres



Add of
surfactants →



Binding to fat dirty and solubilizing it in water



Surfactants

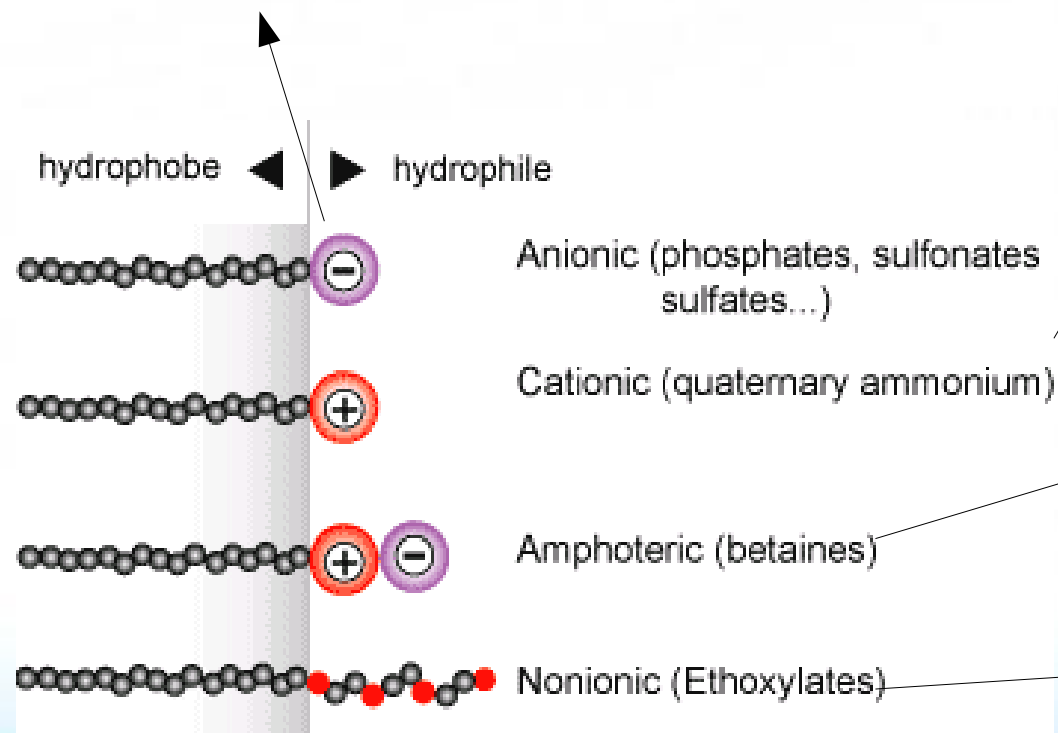
Surfactants can be divided in 4 categories:

Anionic: with negative charge . They have excellent detergent and foaming properties.

Cationic: with positive charge. They have antistatic and hygienising effects, however they have limited detergent properties.

Amphoteric: according to pH they can be cationic or anionic. Combined with cationic or anionic surfactants they improve properties.

Non Ionic: without a nett charge, they are excellent solubilizing and reduce the aggressiveness of the other surfactants on the skin.



Surfactants and water hardness

Water hardness is represented by the concentration of Calcium and Magnesium ions.

It acts in 2 different ways according to the kind of surfactant that we are using:



In case of an anionic surfactant, hardness inhibits the detergent. So we have to add more detergent to have the same effect.



In case of a cationic surfactant, hardness exercises a repulsive action, mostly pushing the surfactant towards the fibre. So we have to add less detergent to have the same effect.



More than surfactants....

In a detergent formula, more than surfactants, we can find other substances, such as:

Enzymes:

Catalyst bi-molecules that foster the elimination of specific stains

Optical brighteners:

molecules that transform the UV radiation in visible, giving a changing white

Anti-redeposits:

Polymers that complex colours, avoiding the re-deposition on fibres.

Preservatives:

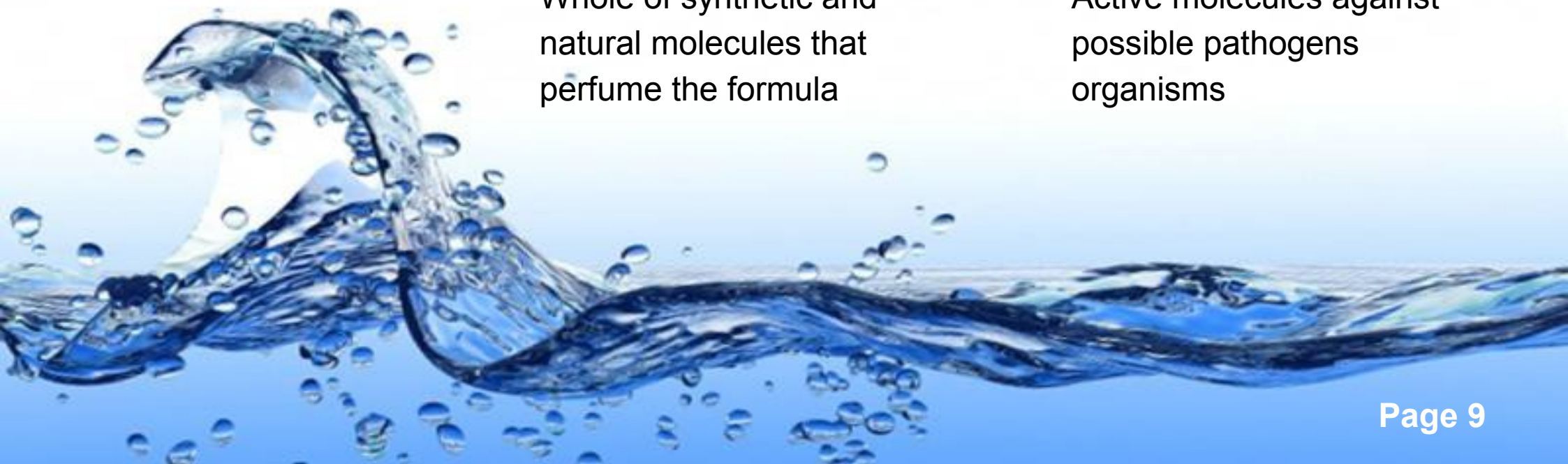
Molecules that preserve product during time

Perfumes:

Whole of synthetic and natural molecules that perfume the formula

Hygienising:

Active molecules against possible pathogens organisms



Sinner cycle

Along with the detergent (chemical action) there are other three different parameters which affects wash.



Pre-Treatments

Beyond the simple machine wash, it is possible to do pre-treatments. These treatments increase the part of the Mechanical action of the cycle, and so we can decrease the actions of the other three parameters obtaining the same result.

A quick and effective action is represented by pre-brushing. In this case it combines the mechanical action with the chemical one, spraying a pre-treating agent and brushing garment.



Pre-Treatments

Pre-treatments must have and excellent detergent-degreasing action, but also a wide range of action on stains. Combine a high degreasing power with a right spotting power is not easy.

Tintolav, for this reason, has created **Hygienfresh® Prezym**.

The complete pre-treatment with degreasing surfactants and enzymes that destroy the more difficult stains.

With just one product we can eliminate all the stains!!!



The right detergent for each wash

Which detergent do we have to use? Do we have to use an additive? Questions at the beginning of each wash... Every detergent\additive has its own specific formula for a specific use.



We are going to understand and discover which detergents use and how to employ them.

So to better exploit their potentialities.



Additives

There are different kind of additives. It depends from the result we want to obtain.

Bleaching agents:

They are the additives added to make laundry whiter and oxidise stains.

Among these additives we can find: Sodium hypochlorite, Hydrogen peroxide, Maxiblanco, Oxygen Super Wash and **Hygienfresh® Oxon**. All these additives need temperatures more or less high to bleach better, with the exception of **Hygienfresh® Oxon that is already active at 25 °C**



Additives



Hygienising agents:

Used to increase the hygienisation degree during wash.

Products we can use are Hygienclean (active from 40-50°C) or Hygienfresh® Oxon (already active at 25 °C)

Finishing agents:

They are the additives to add at the end of the wash to give a special feature to garment.



As excellent finishing agent and additive that prevents wool felting it is possible to use **Hygienfresh® Sfeltrix**. Thanks to its formula it protects and regenerates wool garments.

Wash of delicate garments

To wash delicate garments, generally of animal origin, we have to use detergents with a pH slightly acid. Moreover, we don't have to mix delicate garments with garments not too much bulky, because they could stress the fibre.

Wash programme kind:

- **Water level** → **high**
- **Drum movement** → **generally few and with low duration**
- **Wash temperature** → **low (max 30°C)**
- **Spin** → **with low rotations (avoid it, if possible)**
- **Drying** → **Preferably natural**

**Tintolav
suggest !!!**



White garments wash

White cotton garments suffer better chemical and physical wash stresses. In these cases it is possible to use alkaline detergents and more “aggressive” wash programmes.

Wash programme kind:

- **Water level** → **Low or medium**
- **Wash temperature** → **Medium-High** (in some cases it is possible the T° max of 90°C also)
- **Spin** → **Indifferent** (it depends from the kind of the fibre)
- **Drying** → **Indifferent** (possible drum drying)

**Tintolav
suggests !!!**



Wash of white garments of hospital and communities

For these “special” garments we have to use some special cunning. Use a pre-wash with temperatures around 90 °C with a hygienising as HygienClean or Hygienfresh® Oxon. Use more aggressive detergents that can eliminate protein stains (blood, urine, etc.)



Tintolav suggests !!!



Professional Textile Cleaning



- 🔵 Detergente alcalino con alto potere lavante
- 🟡 Alkaline detergent with high cleaning power
- 🟢 Detergente alcalino con alto poder de limpieza
- 🔴 Détergent alcalin avec fort pouvoir nettoyant



White and coloured garments wash

To wash normal white and coloured garments, there aren't particular restrictions, but we don't have to wash with too high temperatures and use detergents with molecules that avoid colour transfer. Usually the wash temperatures are around 30 and 40 °C and then we have to do a normal drying (both with electric and gas dryers)



**Tintolav
suggests !!!**



Very dirty garments wash

To wash very dirty garments (oil or other difficult dirty) it is better to use aggressive detergents suitably studied.

Example of wash programme:

- **Water level** → **Indifferent**
- **Wash temperature** → **Medium-High (30-60°C)**
- **Wash programme** → **long with many mechanical movements**
- **Drying** → **Indifferent**

Professional Use

Professional Textile Cleaning

Detergente sgrassante con elevato potere lavante
Degreasing detergent with high cleaning power
Detergente desengrasante con alto poder de limpieza
Détergent dégraisante avec fort pouvoir nettoyant

Lavatute



**Tintolav
suggests !!!**



HygienFresh[®]
Profumo & Igiene

**Oil Remover
DeoDetergente**

Sgrassante

UK Detergent for fatty / grease stains
ES Detergente para mancha de grasa
FR Détergent pour taches d'huile
PT Detergente para nódoas de gordura
DE Waschmittel für für Fett-und Ölflecken

Mangiaodori ★★ Igienizzante

Finishing agents

Finishing agents are products to add during the last rinse to give a final peculiarity to the garment.

There are 2 types :

- Softeners → Their function is to leave garment soft
- Pre-starching → Their function is to starch the garment

A final very appreciated feature is the one of an **intense and exciting fragrance**.

With **Hygienfresh® softeners** you can perfectly obtain the 2 targets :
A perfect hand and an incomparable fragrance !!!!



*la differenza si
sente !!*

Softeners

They are used to soften and make garments ironing easy. They are generally composed by cationic surfactants that bind to fibres that have been negatively charged during wash.

Only Hygienfresh® softeners can give you a softness and fragrance without equals !!!



Softeners

Thanks to Deowash and EnzymaticDeowash programmes, developed by Hygienefresh®, perfume **becomes synergic!**

Using these programmes, where detergent and softener have the same fragrance, you will enhance and increase the fragrance of your garments!!

DeoWash system



Note di Pulito

Enzymatic DeoWash system



Muschio Bianco

WET-CLEANING



Professional
wet cleaning



Gentle wet
cleaning



Very gently
wet cleaning

Wet cleaning is a special wash technique that uses water as solvent.

Wet cleaning machines are purposely projected to wash in water all garments that could not be washed with this solvent before.

The peculiar features of this method are:

- **Different water levels and water loading from a normal wash with water**
- **Particular movements during wash**
 - **Particular drum features to increase the detergent and water penetration into garments**
- **Particular wash programmes**



WET-CLEANING



Professional
wet cleaning



Gentle wet
cleaning



Very gently
wet cleaning

Thanks to this innovative wash method is now possible to wash also wool with water.

The only cunning is to use detergents studied for this method.

Special detergents for wet cleaning are more concentrated and formulated to be compatible with this technique. Moreover they must have a controlled foam.



Professional
wet cleaning



WET-CLEANING of WOOL

Wool wash in wet cleaning has to be done with the specific programme for this kind of animal fibre. Moreover drying has to be done leaving a small percentage of water. If it is dried too much the wool felts and the garment loses one size!



**Tintolav
suggests !!!**



Professional
Use

Professional Textile Cleaning

LanaClean

W

● *Detersivo speciale per il sistema Wet Cleaning*

● *Special detergent for Wet Cleaning system*

● *Detergente especial para el sistema Wet Cleaning*

● *Détergent spécial pour le système Wet Cleaning*



Wash in WET-CLEANING of duvets

Duvets wash is a particular process and we have to use specific detergents with a disentangling effect.

Moreover wash has to be done with delicate movements to avoid damaging the garments cause to wet feathers crush.

Detergents must contain surfactants that can penetrate into downs feathers and must have additives that can protect and down feathers during drying.

**Tintolav
Consiglia !!!**



Professional Use

Tintolav
Experience in evolution

Professional Textile Cleaning

PiumaClean

- Detersivo speciale per piumoni nel sistema Wet Cleaning
- Special detergent for duvets in the Wet Cleaning system
- Detergente para edredones en el sistema Wet Cleaning
- Détergent pour couettes en le système Wet Cleaning

W

And remember...



An excellent system must ensure the perfect garments cleanliness...



WE HAVE TO SEE THE RESULT!!!



An excellent system must ensure a soft and velvet hand on garment ...



WE HAVE TO TOUCH THE RESULT !!!



A winning wash system must be exciting and the fragrance must “catch”...



WE HAVE TO FEEL THE RESULT !!!

