

Enzyme FAQs

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Enzyme FAQs

What are enzymes?

Protein based ingredients that effectively target specific soil types (any unwanted matter on your laundry).

How do enzymes work?

Enzymes attach themselves to specific soils (any unwanted matter) such as proteins, fats/oils, starches and gums. They then break down the matter so it can be removed from laundry items and rinsed away in the washing machine.

Why is ecostore now using enzymes in its laundry products?

We've used enzymes in our dishwasher powder and dish tabs for many years, but we've avoided using them in laundry products because of the chance they might irritate sensitive skin. It's well known that we're big believers in the precautionary principle, which says that if there's any doubt about the safety of an ingredient, we'll simply look for an alternative. This principle is even more important when it comes to caring for the health of people with sensitive skin – we know many of our customers face issues with sensitivities.

However, continual product improvement is part of our DNA and from careful research we believe we can safely make use of enzymes in laundry products. The Environmental Working Group (EWG), which we have consistently used as a benchmark in relation to ingredient safety, classifies enzymes as a low hazard (1).

From using enzymes in our dishwasher products over the years, we know they are very efficient cleaners and have allowed us to create better performing products that use fewer chemicals and are safer for you.

We're confident that by using enzymes in our Extra Clean range of laundry products, it's extremely unlikely they would irritate skin – less likely than the proportion of people affected by fragrance, for example. We list all our ingredients on our pack so people are fully informed about what they buy, and in the same way as we don't use fragrance in our ultra-sensitive range, we won't be adding enzymes to this range either. We take customer feedback really seriously so if there's any indication an ingredient is causing problems for people, we will fix it.

Why have enzymes had a bad reputation in laundry products?

When detergent grade enzymes were first used in the 1960s, respiratory issues were quickly discovered in workers exposed to airborne enzymes. Once identified, the manufacturers of enzymes developed an encapsulation technology to ensure the active enzymes were not able to be inhaled.

What type of enzymes are used in ecostore laundry products?

Protease, amylase and mannanase.

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What is protease?

Enzymes are protein based catalysts that target specific soil types (unwanted matter on laundry). Proteases are a group of enzymes that target protein based stains such as sebum, blood, grass, milk and egg.

What is amylase?

Enzymes are protein based catalysts that target specific soil types (unwanted matter on laundry). Amylases are a group of enzymes that target starch based stains such as wheat/porridge, corn starch, potato starch, processed food, ketchup, sauces, and soups.

What is mannanase?

Enzymes are protein based catalysts that target specific soil types (unwanted matter on laundry). Mannanase targets mannan based stains such as processed food, like tomato sauce, baby food, icecream, chocolate and drinks.

What are the benefits of enzymes?

The key benefits are improved cleaning performance for common, tough stains, their ability to increase cleaning performance in lower wash temperatures, and lower ecological impacts of the detergent.

Are there environmental benefits to enzymes?

Yes, increased performance with minimal environmental impact. A high percentage of surfactants/additives would have to be added to achieve the same cleaning performance boost gained from a small inclusion of enzymes.

Are the enzymes ecostore uses the same as all those used by other laundry product manufacturers?

The enzymes we use are industrially produced using genetically modified microorganisms. We are not against the ethical use of GE contained in laboratories, such as the production of medicines like insulin or more recently for the production of enzymes. Not all brands disclose information about the enzymes they use, but it is likely that mainstream brands are using enzymes produced using genetic modification in a similar way.

Where do enzymes come from?

Enzymes are naturally occurring materials essential to all life forms. For humans, enzymes provide a variety of functions - the most well known is digestion. Digestive enzymes are secreted by the pancreas into the small intestine: amylase for carbohydrates, starches, sugars; protease for proteins found in meat, nuts, eggs, cheese, fish and beans; and lipase for fats and oils found in dairy, meat, and nuts. Enzymes are in all our cells and allow them to quickly produce chemical reactions to build things or break them down.

How are enzymes produced?

Genetically engineered bacteria produce and excrete enzymes in a fermentation tank. The mass is centrifuged and the enzymes separated. The enzymes are concentrated and further processed. The microorganisms are neutralised and used as fertilizer.

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Will enzymes irritate my skin?

Given the very low inclusion levels and the encapsulation technology to protect the enzyme, we're confident that it is extremely unlikely enzymes will irritate skin – the likelihood of irritation is less than the risk associated with fragrance, for example.

Will enzymes damage my clothes?

Enzymes will not damage clothing. In fact their deep cleansing removes ingrained stains and lessens the gradual dulling of colours. However we recommend avoiding protease enzymes for laundering wool and silk as enzymes may damage their fibres.

Are enzymes biodegradable?

Enzymes are readily biodegradable.

Are enzymes suitable for greywater?

Enzymes can actually improve grey water quality by offsetting a larger amount of surfactants/additives.

Are enzymes genetically modified?

The enzymes used in ecostore auto dish powders, dish tabs and laundry products are not themselves genetically modified; they are a by-product of genetically engineered bacteria. We are not against the ethical use of GE contained in laboratories, such as for the production of medicines like insulin or more recently for the production of enzymes.