

DESIGN EYEWEAR GROUP

# BIO ACETATE

A Step Towards  
Sustainability



## Why Bio Acetate Matters in Eyewear

Across industries, our environmental impact has become a global priority. At Design Eyewear Group, we want to make informed decisions that benefit both our customers and the planet. One material leading this change is bio acetate, a more eco-conscious alternative to traditional acetate.



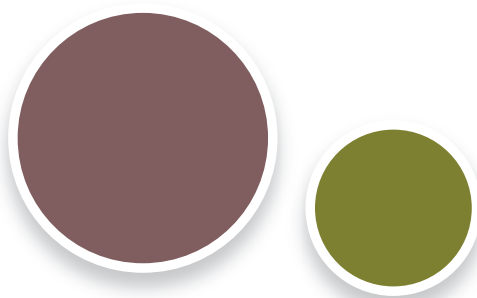
### What is Bio Acetate?

Bio acetate is a modified version of traditional acetate. While classic acetate consists of cellulose powder (from wood or cotton) combined with a plasticizer made from fossil fuels, bio acetate uses a plasticizer sourced from biobased materials.

There are several bio acetates on the market. The one we use is called BioCell. As the cost of production is about 10% higher compared to regular acetate, our bio acetate eyewear is also slightly more expensive.

#### Cellulose

is the main component of bio acetate, derived from wood pulp or cotton. This is reacted with acetic anhydride to obtain our bio acetate. BioCell uses wood pulp.



#### Plasticizer

The component that makes acetate flexible. In bio acetate, it is biobased rather than fossil-based. BioCell derives its plasticizer from food waste.

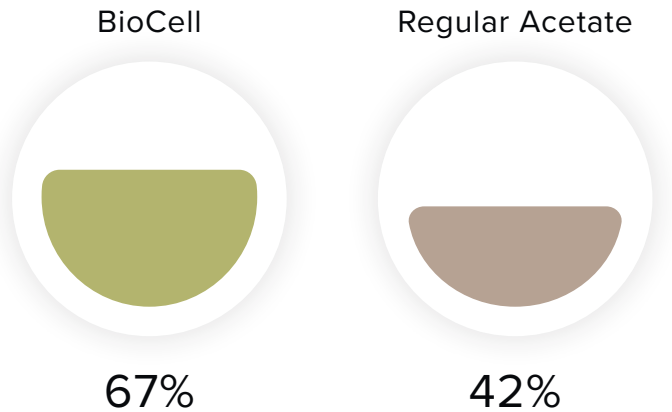
### Why Use Wood Cellulose Over Cotton?

Our acetate providers prefer using cellulose from wood rather than cotton because the production process consumes less water. Growing trees is also more eco-friendly compared to cotton farming, making wood cellulose a more sustainable choice.

## BioCell is both Bio-based and Bio-degradeable

**Bio-based** means that it originates from material which is natural and renewable, in this case wood pulp and biomass. Whereas regular acetate is produced with 42% sustainable content, BioCell comes in at 67%.

**Bio-degradeable** means that the material can be broken down by the enzymatic activity of microorganisms, sunlight, and other environmental physical agents, into simple chemical compounds such as water, carbon dioxide and methane.



While traditional acetates are challenging to recycle due to their chemical bonds, bio acetate tends to be more mouldable, making it easier to recycle. Additionally, the bio acetate we use biodegrades at a rate of **90% within 115 days**, meeting the UNI-EN-ISO 14855-2: 2018 standard for biodegradability.

## We Use Bio Acetate for:



WOOW Be Green



Prodesign Bridge



William Morris London  
Eco Eyewear

## Your Bio Acetate is Alive

There are several ways to produce bio acetate, some resulting in better quality than others. At Design Eyewear Group, we prioritise using high-quality bio acetate for our eyewear collections. This means that on a day to day basis, you wouldn't be able to tell if the acetate at hand is bio or not.

Over time, acetate will keep developing, which means that vibrant hues can fade slightly over time or be affected by sunlight. This is also the case for bio acetate.

Our commitment to sustainability extends beyond just the materials we use in the frames—we are also working on making other aspects of our packaging, such as polybags, more environmentally friendly.



## The Difference Between Regular Acetate and Bio Acetate

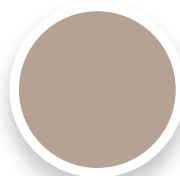
### BioCell Acetate

Uses biobased plasticizers and renewable cellulose sources, achieving 67% bio-based content on average.



### Regular Acetate

Consists of 42% sustainable content because it includes some amount of natural materials. However, it still relies on fossil-based plasticizers.



## Biodegradability and Environmental Impact

It's important to note that while the acetate itself is biodegradable, other parts of the eyewear, such as the nose pads and hinges, are not necessarily made from bio-based materials and do not share the same sustainability percentages.