

# Dei®Bio Color concentrates

Available as Masterbatches and pigment preparations

Dei®  
Bio

We develop tailor-made Masterbatches and pigment preparations for the dyeing of bioplastics, which are individually adapted to the biomaterial of our customers. Due to the multitude of available "Bio-" plastics and their varied technical characteristics and original colors, we will choose a suitable carrier material for each individual plastic. **The three most important questions for us as a color manufacturer are:**

## ▶ WHAT TYPE OF BIOPLASTIC NEEDS TO BE DYED?

We will determine the suitable carrier material and the correct raw pigment to use for the selected bioplastic. In addition, we will take into consideration whether a certification according to the EN13432 standard on biodegradability is required or not.

- ▶ **Biodegradable petroleum-based plastics**  
(e.g. PBS, synthetic polyester, polyvinyl alcohol)
- ▶ **Biodegradable biologically-based plastics**  
(e.g. PLA, thermoplastic starch, lignin-based thermoplastic)
- ▶ **Bio-based but not biodegradable**  
(e.g. PE and PVC made from bioethanol, PA made from renewable raw materials)



## ▶ WHAT DO YOU NEED TO CONSIDER WHEN DYING?

Our recommended additional amount of color concentrate for the bioplastic should not be exceeded so that an EN 13432 certification is not jeopardized. Tests have shown how, for example, a PLA blend and a PBS can be dyed in comparison to a HDPE raw material when they both have the same amount of added pigment. In addition, in this color test almost the maximum permissible amount of additional coloring agent [according to EN 13432 and the heavy metal limit values] was added to show the optimal coloring.

The quality of the dyeing and the shades that can be achieved is highly dependent on the choice of bioplastic.

## ▶ WHAT CAN BE DYED?

We provide suitable Masterbatches for bioplastics made from renewable raw materials (e.g. **bio-based PE, PVC, PA**), and for biodegradable and compostable plastics (e.g. **PLA, PBS, PHA**), as well as for conventional plastics.

Do you still have any questions? Please do not hesitate to get in touch with us. Our development team is looking forward to new challenges.