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Recycling Preparative HPLC  
LaboACE LC-5060

## Analysis of Discoloring Matters in Polymer 1

**Keyword:**

Polymer Additives, Degradation Analysis, Extraction of Discoloring Substance, Size Exclusion Chromatography

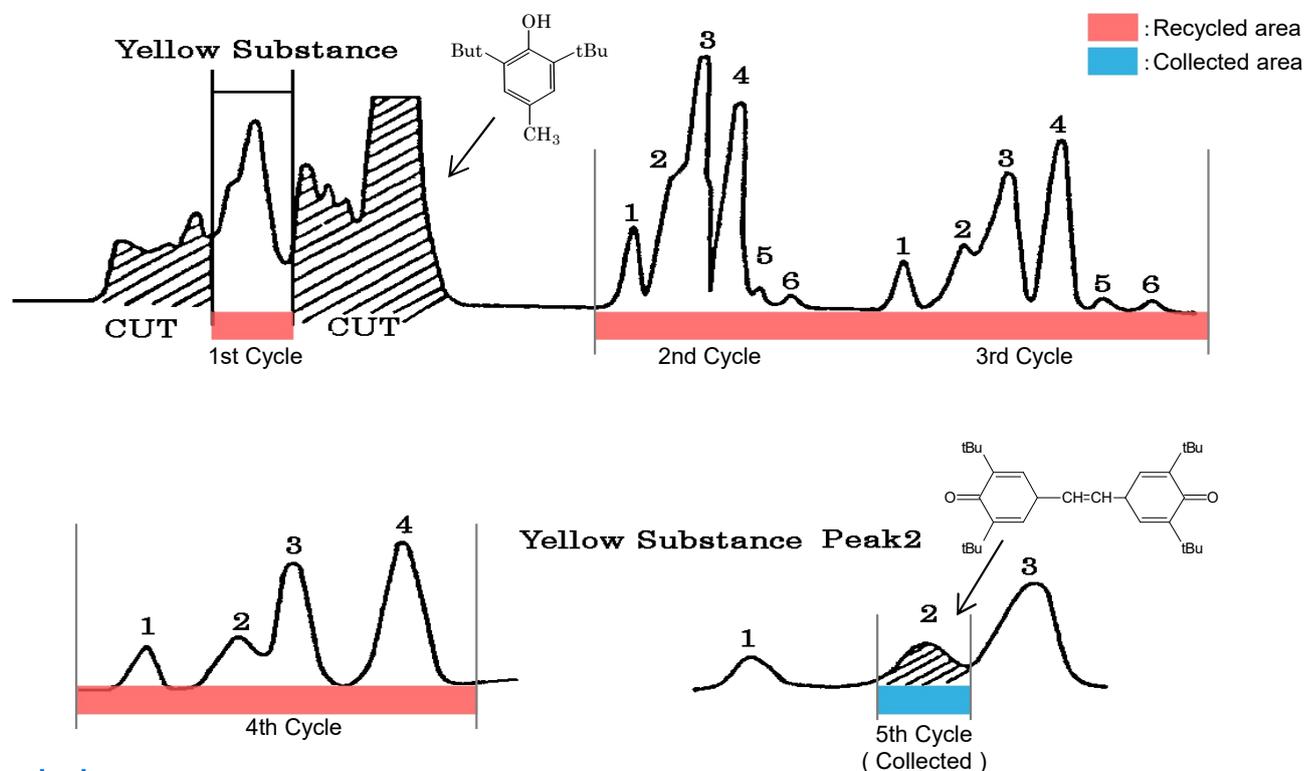
### Introduction

When polymer additives deteriorate or react with each other in polymer, the polymer get discolored and lose its commercial value. Recycling preparative HPLC is often used as a very effective means to identify the cause. Here is one of such examples.

### Experiment and Results

Sample: Antioxidant BHT which deteriorated in the air and turned yellow  
We tried to isolate the coloring substance by recycling preparative HPLC.

Instrument : LC-908 (Detector : RI)  
Column : JAIGEL-1H + JAIGEL-2H in series  
Mobile phase : Chloroform  
Flow rate : 3.5 mL/min



### Conclusion

Separation was not good enough at the first cycle, so we continued and were able to isolate the colorant, Peak 2, at the fifth cycle.