photobiologyFilters Version 0.1.3
Catalogue of filters

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1 Introduction

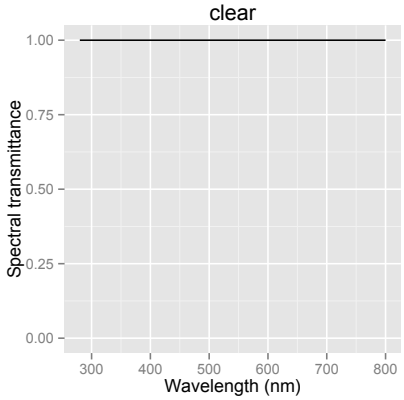
```
library(ggplot2)
library(photobiologyFilters)

## Loading required package:  photobiology
```

```
filter.plotter <- function(filter_name, w.low = 280, w.high = 800, ylab = "Spectral transmittance") {
    spectrum.data <- data.frame(w.length = seq(280, 800, length.out = 300))
    spectrum.data$transmittance <- calc_filter_multipliers(spectrum.data$w.length,
        filter_name)
    fig_linear <- ggplot(aes(x = w.length, y = transmittance), data = spectrum.data) +
        labs(x = "Wavelength (nm)", y = ylab, title = filter_name) + ylim(0,
        1) + geom_line()
    # fig_log <- fig_linear + scale_y_log10(limits=c(1e-5,30))
    print(fig_linear)
    # print(fig_log)
}
```

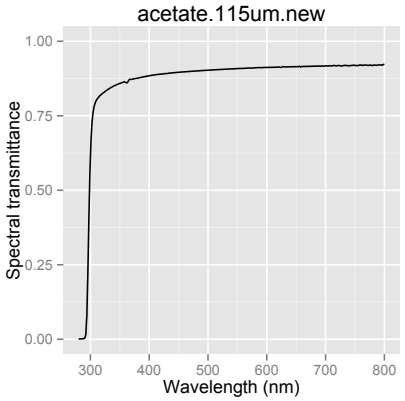
2 Clear filter

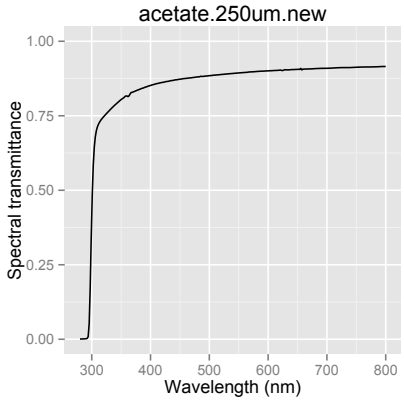
```
filter.plotter("clear")
```

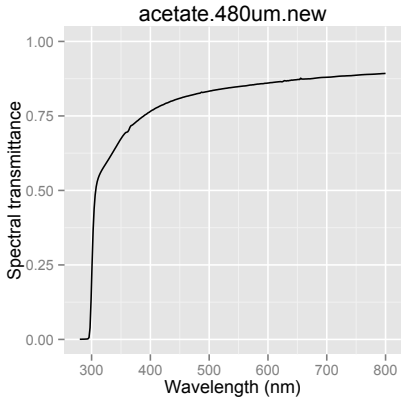


3 Cellulose diacetate

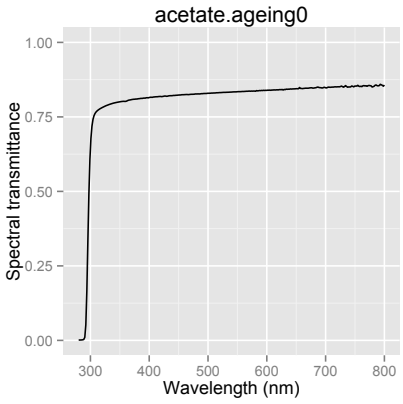
```
for (filter in c("acetate.115um.new", "acetate.250um.new", "acetate.480um.new")) {
    filter.plotter(filter)
}
```

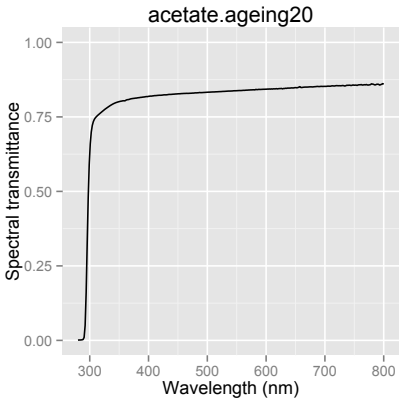


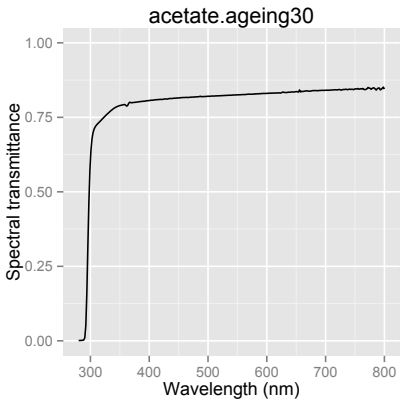


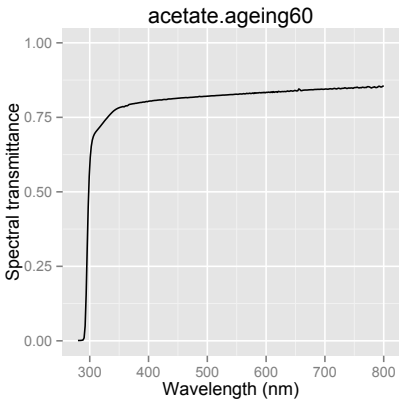


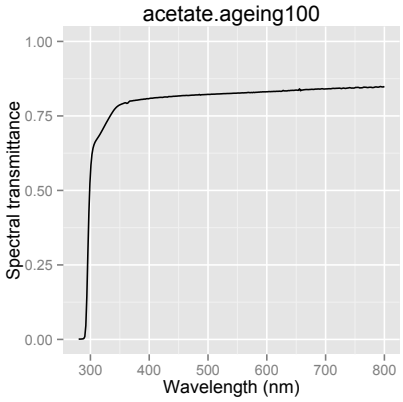

```
for (filter in c("acetate.ageing0", "acetate.ageing20", "acetate.ageing30",
    "acetate.ageing60", "acetate.ageing100", "acetate.ageing180", "acetate.ageing300")) {
    filter.plotter(filter)
}
```

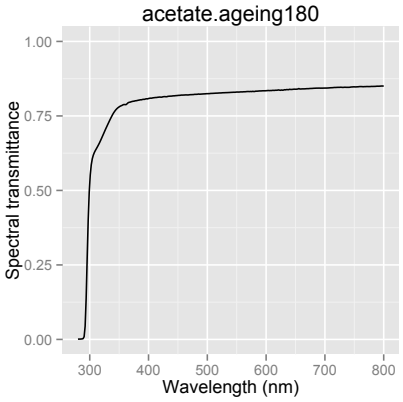


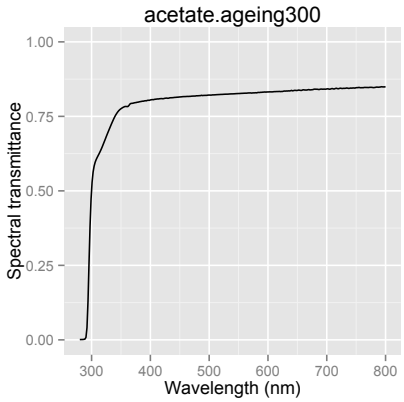






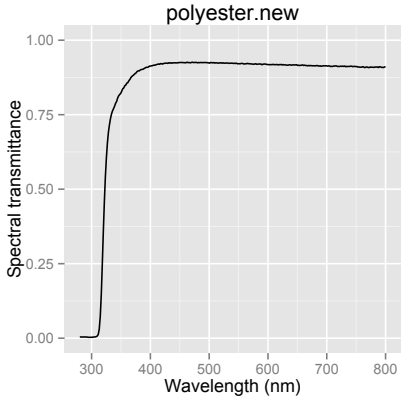

acetate.ageing100
Spectral transmittance
1.00
0.75
0.50
0.25
0.00
300
400
500
600
700
800
Wavelength (nm)


acetate.ageing180
Spectral transmittance
1.00
0.75
0.50
0.25
0.00
300
400
500
600
700
800
Wavelength (nm)


acetate.ageing300
Spectral transmittance
1.00
0.75
0.50
0.25
0.00
300
400
500
600
700
800
Wavelength (nm)

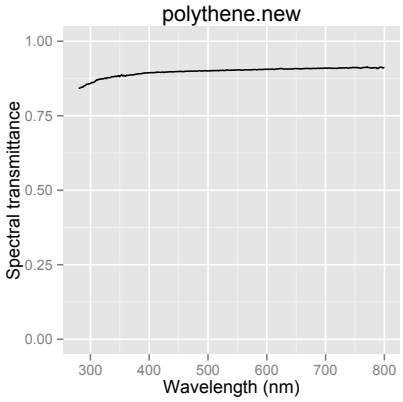
4 Polyester

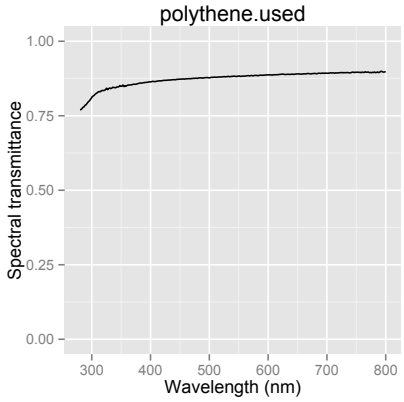
```
filter.plotter("polyester.new")
```



5 Polythene

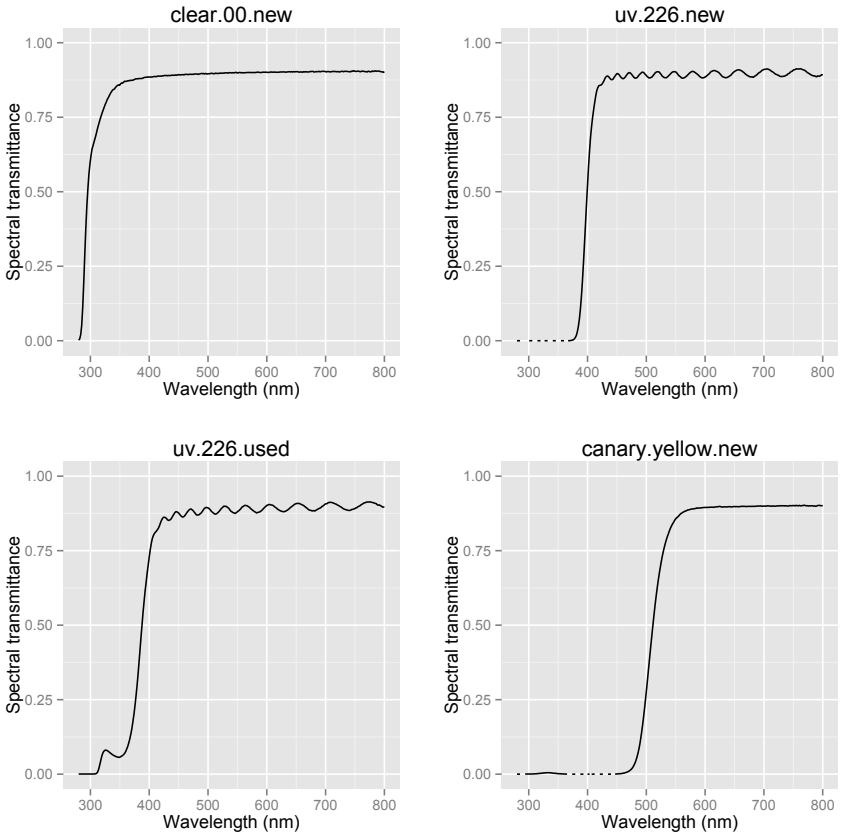
```
filter.plotter("polythene.new")
filter.plotter("polythene.used")
```

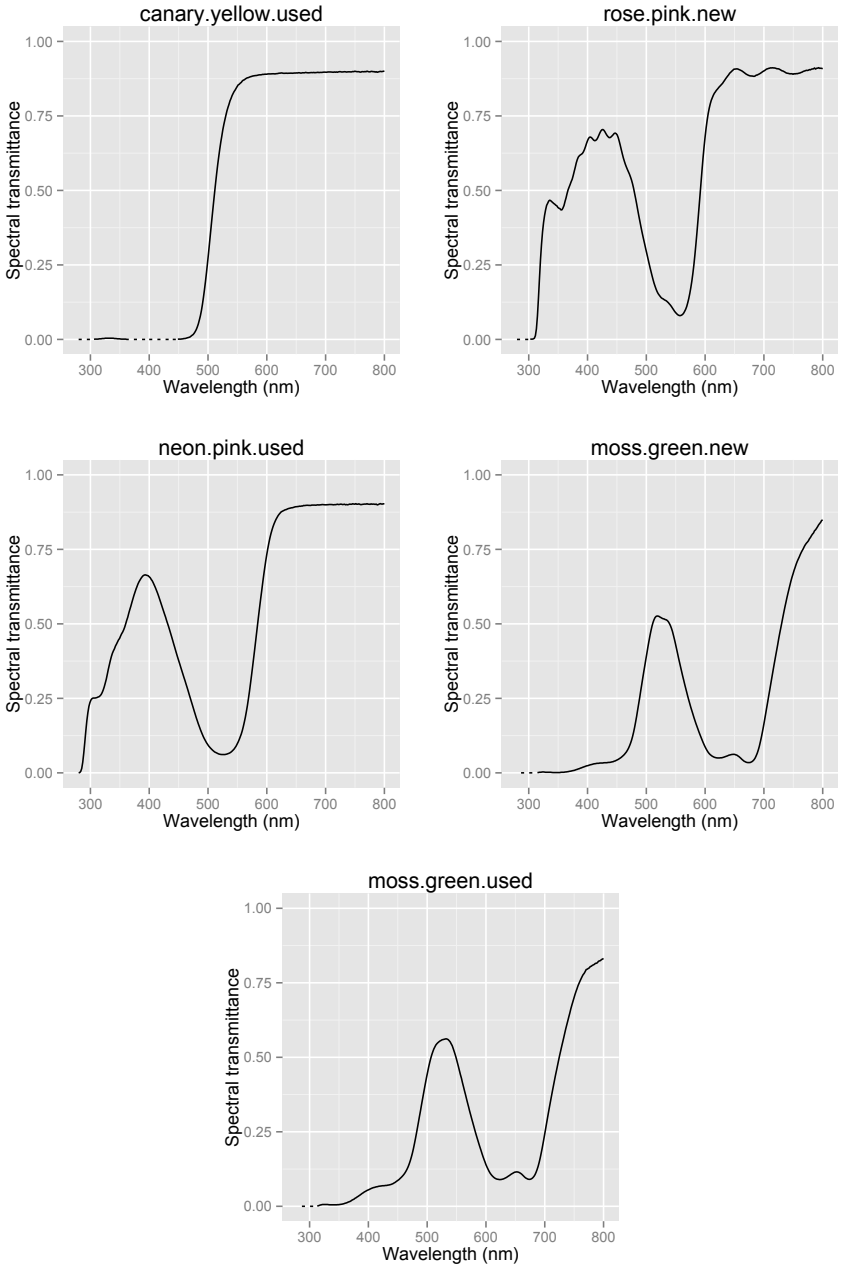




6 Rosco filters

```
for (filter in c("clear.00.new", "uv.226.new", "uv.226.used", "canary.yellow.new",
    "canary.yellow.used", "rose.pink.new", "neon.pink.used", "moss.green.new",
    "moss.green.used")) {
    filter.plotter(filter)
}
```




canary.yellow.used
rose.pink.new
neon.pink.used
moss.green.new
moss.green.used
Spectral transmittance
Wavelength (nm)
1.00
0.75
0.50
0.25
0.00
300
400
500
600
700
800

7 BPI AGri Visqueen

```
for (filter in c("solatrol.new", "luminance.new")) {
    filter.plotter(filter)
}
```