photobiologyPlants Version 0.0.1
UVR8 related functions and data

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1 Introduction

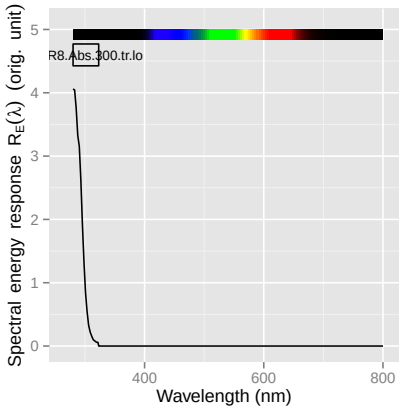
```
library(ggplot2)
library(photobiologyWavebands)
```

```
my.plotter <- function(bwfs.fun, w.low=250, w.high=400, ylab="Action"){
  spectrum.data <- data.frame(w.length=seq(250, 400, length.out=300))
spectrum.data$action <- bwfs.fun(spectrum.data$w.length)
fig_linear <- ggplot(aes(x=w.length, y=action), data=spectrum.data) +
  labs(x="Wavelength (nm)", y=ylab) +
  geom_line()
fig_log <- fig_linear + scale_y_log10(limits=c(1e-5,30))
print(fig_linear)
print(fig_log)
}
```

2 Plotting wavebands

Wavebands can be directly plotted with function plot. Here we guive just a couple of examples, as with the many options plotting all wavebands using different options would be tedious. Waveband objetcs defining BSWFs can be similarly plotted.

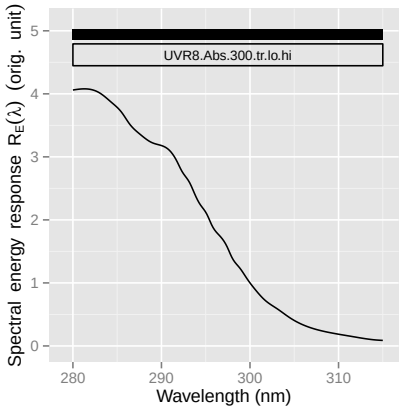
```
plot(UVR8.Abs())
```

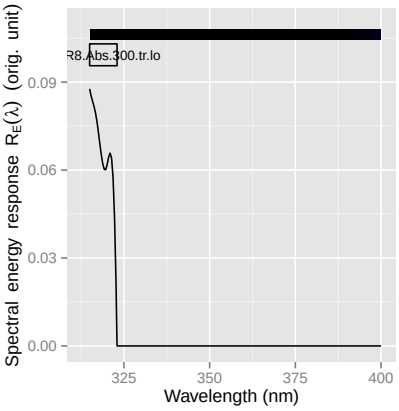


We can limit the plotted wavelengths to a range, even using another waveband object.

```
plot(UVR8.Abs(), range = UVB())

plot(UVR8.Abs(), range = UVA())
```





3 The UVR8 functions

3.1 UVR8

```
my.plotter(UVR8.Abs.fun, ylab="UVR8 spectral absorbance")
```