- Yamazen's UV Detectors Provide a Broad Detection Range -

Importance of the Broad Detection Range in the Prep Chromatography

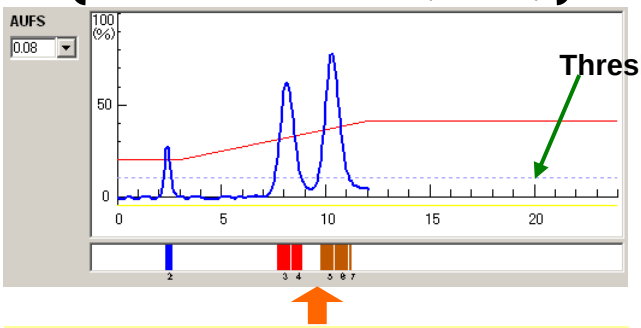
No Sample Loss, No Peak Saturation

Yamazen's single wavelength UV detector is equipped with a powerful light source and a photo detector (photodiode) with a large photosensitive area that receives strong and maximum amount of light. The amount of light that Yamazen's photo detector (photodiode) receives through flow cell is several dozen times more than the small photodiode array. Thus, Yamazen's UV detector can detect accurately over a broad range of absorbance.

■High Sensitive Detection

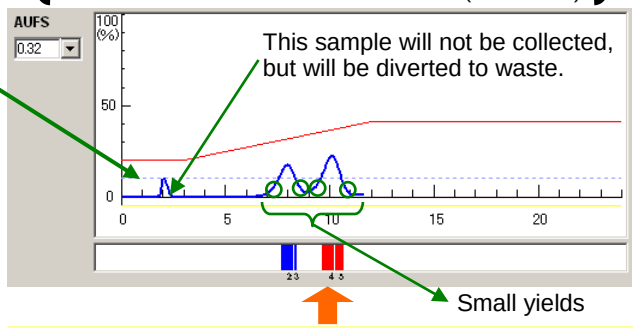
When running a small size sample or a sample that has low UV absorbance;

(Highly Sensitive Sample Separation on the Yamazen's UV Detector (0.08 AUFS))



Even those samples that are small and/or samples that have low UV absorbance will also separate well and be collected without any loss.

(Sample Separation on the insensitive UV Detectors of Other Manufacturers (0.32 AUFS))



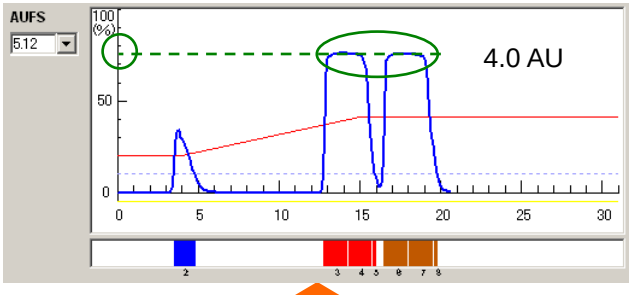
An entire peak or a good portion of the peaks are detected below the threshold, and a precious sample may be lost.

Sample: Butyl p-hydroxybenzoate, 0.5mg Methyl p-hydroxybenzoate, 0.5mg Toluene, 9mg
Column used: Yamazen's Hi-Flash, L (30 gram) Fractionation mode: Peak mode separation

■High Absorbance Monitoring up to 4 AU Corresponding to Change of Concentration

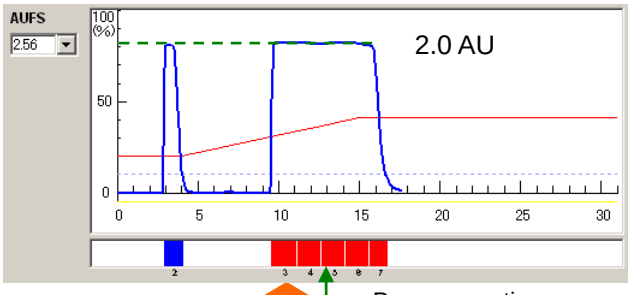
When running a large scale sample or a sample that has high UV absorbance;

(Yamazen's High Performance UV Detectors)



Yamazen's UV detectors are capable of detecting up to 4.0 AU without any peak saturation. Even a large-scale sample or a sample that has high UV absorbance can be separated well.

(UV Detectors of Other Manufacturers)



Peaks are saturated at around 2.0 AU, and are not well separated.

Sample: Butyl p-hydroxybenzoate, 500mg Methyl p-hydroxybenzoate, 500mg Toluene, 900mg
Column used: Yamazen's Hi-Flash, 2L (45 gram) Fractionation mode: Peak mode separation

Yamazen's powerful UV detectors are sure to meet any customer's requirements in flash chromatography.

YAMAZEN CORPORATION

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Yamazen's UV detectors are designed to be best suited to the flash chromatography system on its optical system.

To achieve a good chromatography without losing any valuable sample, a broad range of detection capability, detecting from low absorbance samples to high absorbance samples, is required. Yamazen's UV detectors have the powerful 30W D2 lamp that dispatches strong light, and a photo detector (photodiode) with a large photosensitive area that receives maximum amount of light. Thus, detecting at large S/N (Signal to Noise) ratio is possible. This makes baseline very stable, which results in accurately detecting low absorbance sample (highly sensitive) as well as profiling large peaks of the high absorbance sample clearly and precisely for which transmitted light through the flow cell is very weak. The optical system of multiple-wavelength UV detector is typically designed as shown in fig. B below. It is equipped with a weak light source with no reference. Because of its system configuration, theoretically it is very difficult to accurately detect in a broad range of absorbance.

Fig. A: Yamazen's UV Detector

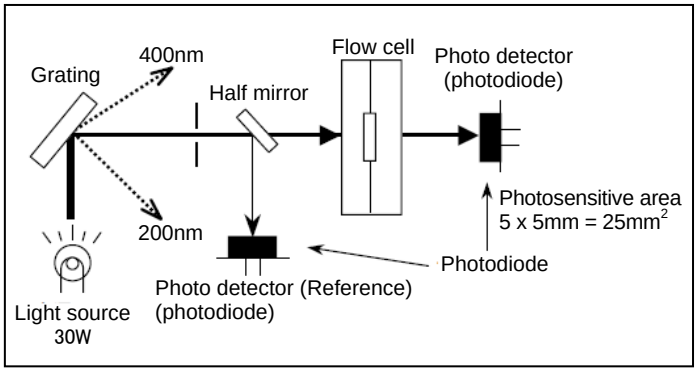
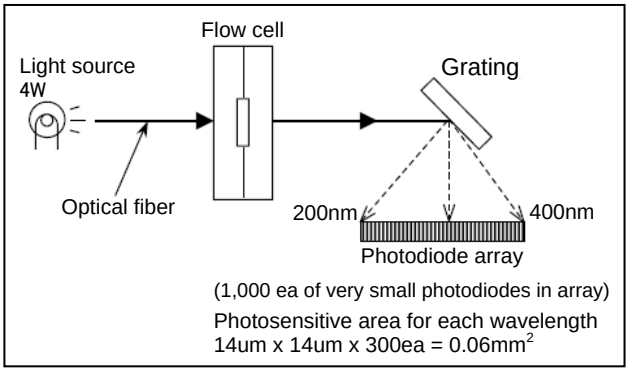


Fig. B: UV Detector with photodiode array



■Thresholds (%) are shown by the dotted lines.