

Method: ACEN-21 Revision: 6 Final Revision Date: 04/01/2008	Acetonitrile Specification Tests	INEOS Nitriles
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METHOD SUMMARY

One indication of the purity of acetonitrile is how strong the absorbance is in the range of 290 to 190 nm. Customers may require absorbance measurements at different wavelengths. The point at which the absorbance increases to greater than 1 is the UV cut-off point.

SAFETY

Acetonitrile is hazardous to the health and dangerous to handle. Use acetonitrile in a well ventilated hood. Review the MSDS for detailed information concerning toxicity, first aid procedures and safety precautions.

Refer to the appropriate safety section or site manual for the necessary protective equipment to use when handling any reagents or samples.

INTERFERENCES

There are no known interferences to this method.

APPARATUS AND REAGENTS

1. **Spectrophotometer**, UV-Visible, Hitachi U-2000, Milton Roy 1201 or equivalent.
2. **Cells**, 10 mm, Quartz or UV transparent, matched

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CALIBRATION

Refer to Calibration Method CAL-1 and/or the instrument manual for wavelength and absorbance scale calibration procedures.

PROCEDURE

1. Place empty cells in both sample and reference compartments.
2. Zero the instrument.
3. Place acetonitrile sample in the sample cell.
4. Autozero at 290 nm.
5. Scan the sample over the wavelength range of 290 to 190 nm.

Record the wavelength at which 1.0 absorbance is reached on the recorder scan. Also record the absorbances at 280, 254, 230, 220, 210, 206 nm.

REPORT

Report the wavelengths to the nearest nm and the corresponding measured absorbances to the nearest 0.001 unit.

Example: Cutoff 191 nm

280 nm = 0.003 A
254 nm = 0.006 A
230 nm = 0.037 A
220 nm = 0.093 A
210 nm = 0.125A
206 nm = 0.188 A