

<b>Method:</b> ACRN-19 Revision: 5 Final Revision Date: 06/03/03	<b>Acrylonitrile Specification Tests</b>	<b>INEOS Nitriles</b>
Last Review: 04/01/08		pH
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## METHOD SUMMARY

The pH of a 5% solution of acrylonitrile in water is measured directly with a pH meter and electrode.

## SAFETY

Acrylonitrile is hazardous to the health and dangerous to handle. Use acrylonitrile 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.

## REFERENCES

STM C-5-74, "pH and Titration Value of Acrylonitrile Solution"

## INTERFERENCES

There are no known interferences to this method.

## APPARATUS AND REAGENTS

1. **pH Meter.**
2. **pH and Reference electrodes.**
3. **Stirrer**, magnetic, variable speed.
4. **Stirring bar**, Teflon, magnetic.
5. **Graduated cylinder**, 50 mL.
6. **Beaker**, 1000 mL, 150 mL.
7. **Buffer Solution**, pH7.
8. **Dropper bottles**, containing 0.01N NaOH and 0.01N H<sub>2</sub>SO<sub>4</sub>.

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9. **Water**, deionized (D.I.)

**CALIBRATION**

Refer to pH meter calibration procedure CAL-3. Insure that the stirring motor speed is the same for sample analysis as for calibration.

**PROCEDURE**

1. Add 760 mL DE.I. water and a stirring bar to a 1000 mL Beaker. Rinse electrode with D.I. water.
2. Add 50 mL of acrylonitrile sample. When solution turns clear, take pH reading.

This solution may be used for Titration Value determination, ACRN-21.

3. Rinse electrode with D.I. water. Set in pH 7 buffer to soak.

**REPORT**

Report the pH of the 5% aqueous solution to the nearest 0.1 pH unit.

For example: pH=7.2